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ABSTRACT

This interdisciplinary study examined socialization of first and fifth grade elementary school children into the student role. The study focuses on the effects of teachers' socializing communication on childrens' views of norms for classroom life by means of observation and questionnares. Data of several types are analyzed and interrelated: teacher communication about the content of student role; student perceptions of that role; the impact of structural variables like openness of classroom on both teacher talk and student thought; the impact of children's demographic characteristics on both; and the interrelationships between teacher talk and student thought. Three broad patterns emerge from these data: (1) Teachers play a managerial role and students respond in ways reminiscent of workers rather than learners; (2) Of demographic differences among children, grade level stands out as having dominant impact; and (3) Teacher communication has a differential impact upon the audience, and the meaning of teacher messages is not always clear without knowing the recipient. Study data are displayed on 19 charts, and a published version of the study, entitled Teacher Talk and Student Thought: Socialization into the Student Role, accompanies the report. (JMK)

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FINAL REPORT

SOCIALIZATION INTO THE STUDENT ROLE

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In modern societies systems of formal schooling are charged with the dual responsibilities of providing academic training and citizenship training. Research into the effectiveness of our schools has, however, tended to focus on one or the other of these dual concerns. Yet somehow, teachers influence the development of both scholarship and citizenship through day-to-day communication of expectations (cf. Brophy & Good, 1974). They teach facts. But they also teach a role--the student role--within which conduct is maintained and facts absorbed. Socialization into this role, from the point of view of both teacher and child, was the focus of our research project.

Although the goals of the project were in many respects descriptive, we were working within a general theoretical framework in approaching the problem of role socialization. Everyone agrees that roles are learned. Yet the vocabulary of the "role theory" literature is metaphorically rich and scientifically sloppy (cf. Biddle & Thomas, 1966; Biddle, 1978). The central scientific meaning of role appears to be action within a prescribed social position or status. Roles are socially determined, in that groups have expectations for how role occupants ought to behave and will behave. Roles are socially understood, in that group members give common descriptions of action within role. Roles are socially learned, in that people learn appropriateness of behavior through direct or vicarious rewards and punishments. Thus there are three logically exhaustive components to a role to be observed: prescriptions for action (what should you do?); descriptions of action (what did you do?); and evaluations after action (what did the others think of it?) (cf. Thomas & Biddle, 1966, p. 28).

These components are also isomorphic with a recent model of human responsibility judgments (Hamilton, 1978a, b; Hamilton & Sanders, 1981).

The model argues that judgments of responsibility--i.e., accountability or liability for sanctions--involve normative or role expectations and deeds performed or omitted as determinants of sanctions themselves. This model deals with adults and already-socialized members of a group. But to learn a role in the first place is to learn its boundaries--what things garner praise, what things evoke blame. Thus the elements of a model of responsibility judgments for the already-socialized can also be seen as the crucial elements for the learning of a role.

The goal of the study--producing a detailed map of socialization into the student role--was thus approached with certain points of mind. The key role "other," from the child's point of view, is clearly the teacher. Thus we emphasize teacher communication about the student role as the potential cause of children's judgments about classroom norms, themselves, and others. Within teacher communication, we further emphasize information about expectations, actions,[1] and sanctions. Given these foci, the attribution and social learning theory literatures provided guidelines for hypotheses about optimal teacher communication; a brief overview of relevant aspects of these literatures is provided in our forthcoming chapter (Appendix G). The emphasis on teacher communication further suggested some look at ways in which teachers themselves differ. Sociological and educational literatures (also reviewed in Appendix G) indicated the importance of examining effects of open versus traditional classroom task structures, as well as the importance of teachers' managerial efficiency irrespective of structure. The final constraint on socialization is the socializee; this constraint is represented in the psychological and sociological literatures as a concern with individual or group differences in socialization (see Appendix G). Review of the relevant literatures convinced us that among the key variables that might affect student role socialization

were the child's age, sex, and social class.

The project was thus initially planned to examine the process of student role socialization within varied classroom task structures and for children of varied age, sex, and social class. We therefore planned for choice of two open and two traditional classrooms in each of first and fifth grades in predominantly working versus middle class schools--for a total of 16 classrooms.[2] In the conveniently located working class schools, however, officially open classrooms were abolished before we could begin data collection. Thus we adjusted to a more mixed 18-classroom design, in which our predominantly middle class school district contributed two open classrooms and two not so designated at each of the two grade levels; and two predominantly working class districts were tapped for a total of 10 rather than 8 classrooms (5 at each grade level), to obtain as much variability in task structure as possible. The measures used for structure of task organization, described below, are then based on our own observations rather than official designations and produce a continuous gradation rather than the official dichotomous labels. An indicator of managerial effectiveness is also provided from our observations. We then followed students the next year to as many classrooms as was feasible (11) to obtain a longitudinal component to the study; to concentrate on the crucial early phases of socialization, we selected 7 second and 4 sixth grade rooms for this second phase.

The fundamental questions to be answered in part involve simple descriptions of teacher talk and student thought about the student role. Thus below, after presenting an overview of methods for the entire study, we will summarize basic data on teacher communication: distribution of attention among the areas of classroom life and, where possible, among particular issues; provision of potentially key socializing information (expectations, attributions,

and sanctions); and, following from social learning theory, the extent to which communication is proactive or reactive, positive or negative in evaluative tone, and of high or low salience or intensity. We then explore differentiation of teacher talk by teacher variables--managerial effectiveness and task structure--and target variables--children's age, sex, and social class.

Children's thought about the student role is obtained through a series of three questionnaires to be described below. In the present report, we will summarize findings concerning the importance of various classroom norms, children's reports of affect they would feel at exceeding norms or at failing to meet them, and the reasons they give for norms' importance. We then look at interrelations among these aspects--importance, affect, and reasons--and at their determination by children's own characteristics and by aspects of teacher communication. We subsequently present preliminary analyses of a second questionnaire on children's judgments of responsibility (praise or blame) and punishment/reward for exceeding classroom norms positively or negatively, as well as teacher responses to the same questionnaire and links between these. Finally, we present data on children's conceptions of classroom justice derived from combining responses to these two questionnaires, and explore potential structural determinants of the degree to which the child fits a model derived from equity theory and previously applied to adults (cf. Hamilton & Rytina, 1980). We reserve for a later addendum to this report a summary of data on children's behavior, obtained for a subset of the children, with its relations to teacher communication and children's views of the student role; we also reserve analyses of an extensive questionnaire probing children's views of their particular classroom and of their own and peers' achievement and conduct. The latter questionnaire and the bulk of the behavioral data were obtained in the second year of data gathering and

are still in early stages of analysis. Finally, a separate addendum by Steven Bossert will provide an initial report on ethnographic data which he and his students gathered in 12 rooms during the first year's study and 8 rooms during the second.

Methods

Categorizing Components of the Student Role

In looking at teacher communication, child behavior, or child perceptions of classroom norms it first proved necessary to distinguish among components of the student role. We have already noted the fundamental dichotomy between scholarship and citizenship in this role, but a more fine-grained approach was preferable for coding purposes. Although the central defining characteristic of the student role is clearly an academic one, even academic instruction can profitably be divided into content versus procedures for operation. On the citizenship side, given that the classroom is a group setting, social procedures for working with or in the presence of others must be instilled. And moral norms must be enforced, in the classroom just as anywhere else in the society. Ranging from those most specific to the setting to those most general to society, the role expectations to be conveyed by the teacher can thus be conveniently divided into four categories or domains: academic performance, academic procedure, social procedure, and social/moral norms. In our initial investigations of teacher communication and child reaction we therefore organized coding in terms of these different domains, making it possible to explore teacher emphasis on one area versus another as well as differences among domains in either socializing strategies used or teacher impact on pupils. Relevant coding operations will be discussed below.

Measures of Teacher Communication

The coding scheme for teacher communication is summarized in Appendix A. The universe of statements that were coded consisted of all remarks that communicated directives about performance or feedback on performance, whether that performance was of an academic or social nature. The only teacher remarks thereby excluded were social talk, such as complementing a student on a new dress, and sheer academic instruction, in which no statements of either role expectations or feedback were being made. All remarks were recorded verbatim and subsequently coded at the level of clauses containing information.

All such clauses were first coded regarding the domain of the remark: academic performance, academic procedure, social procedure, or social/moral norms. Issues considered as falling into each domain are found in the appendix. Clauses were also coded for whether the remark was proactive or reactive (i.e., occurred before or after child behavior); for the quality of the behavior from the teacher's point of view (positive, negative, ambiguous, or not applicable--i.e., when the remark occurred before a behavior); for the target of the remark (boy, girl, small group, or whole group); for the structure of the activity being engaged in by the teacher and by the class; and for the salience of the teacher's remark (essentially whether she appeared to be upset or excited and deliberately drew class attention to it).[3]

Within this universe of communication, some embedded further information to the target: expectations, attributions, or sanctions. These were differentiated as described in the appendix. Categories used for expectations and sanctions were derived from our prior observational experience, while categories for attributions followed closely from the literature in that area. The sole exception to the clause-level analysis is also a new attributional category, mixed, in which the teacher made two linked attributions at once,

one of which was positive and one negative in implication. We felt that use of this combination category represented a more accurate reflection of the information imparted than would be obtained were these treated as independent bits of information.

Observers were trained in two ways. First, sample transcripts of teacher statements taken from previous work were prepared. Observers were taught to code from these transcripts to familiarize themselves with the categories. Second, to be certain that they gathered accurately the set of teacher statements that were of interest for our purposes, each observer was accompanied by one of the experimenters familiar with the codes for a thirty-minute session in a classroom. Later, agreement between observer and experimenter was assessed both for inclusion of remarks into the universe of socialization statements and for recording of basic context information necessary for more detailed coding (i.e., reactivity, quality of remark, and target). Reliability for recording the correct information was .92. Reliability for correctly coding all categories (domain, issue within domain, reactivity, quality, target, teacher activity structure, class activity structure, salience, expectation, attribution, and sanction) subsequently ranged from .75 to .90 with an average of .85. Given that the verbatim records of teacher statements were available for checking, it was readily possible to ensure that this more detailed information was coded correctly during actual data gathering. First, one of the experimenters reviewed all statements recorded for the first three hours of coding per classroom and checked all categorizations with observers individually. Weekly meetings were then held to spot check coding and discuss any problems. Spot checks of the coding against the verbatim teacher statements indicated that after three hours of data collection all coders had reached at least .85 accuracy.

Ten hours of statements made by teachers were collected in each classroom. Only statements made by the adult with primary responsibility for the classroom were recorded, eliminating remarks by student teachers, substitute teachers, or parents. Insofar as possible, statements were recorded verbatim, given that actual coding was done from the notes taken in class.

Observations were scattered throughout the school day. At least two hours of observations were done while the teacher conducted reading lessons or reading groups except in those rooms where reading instruction was not carried out in group fashion. The remaining hours included periods devoted to other subjects such as math as well as less academically oriented periods such as show-and-tell.

Managerial Effectiveness and Task Structure

Managerial effectiveness was not originally built into the project design as a potential determinant of student role socialization. However, as it emerged that managerial issues might be important, we were able to include a questionnaire for observers in the second year's data gathering so that managerial issues could be directly assessed. In analyzing the first year's data, in contrast, we must rely on an indicator of such effectiveness rather than an explicit measure. There is always the possibility, therefore, that the indicator chosen is really "something else," and this should be kept in mind in evaluating the year one results.

Given that the central official task in the teacher role is to impart scholarship, what we chose as an indicator of managerial effectiveness is what might be seen as the teacher's "work orientation": the proportion of socializing communication devoted to academic performance as opposed to procedural or social/moral issues. As a measure of managerial effectiveness,

the danger of using such a variable is that high proportionate attention to academic performance could result either because the teacher has procedural issues under control and is able to do her job, or because she is simply ignoring procedural and social chaos and plodding onward with the lesson. Thus we examined observer comments about the rooms as well as their transcripts, finding consistent evidence that the rooms high in proportionate attention to academic performance were also generally characterized by high student productivity and good behavior. Overall, then, a teacher's relative attention to academic performance, at least in these data, seems a reasonable indicator of managerial effectiveness.

Given that all clauses of teacher communication were coded for the domain addressed, obtaining a score for each teacher's attention to academic performance was simple. We merely calculated the percentage of all clauses coded as dealing with academic outcome. While certain questions cannot legitimately be addressed using this variable--such as, for example, teachers' relative attention to social procedure, because it would have to be negatively correlated--most of the potentially relevant research questions can be. Differences between teachers on attention to academic performance and correlates of these differences will be presented below.

In contrast to the managerial effectiveness measure, we had a number of possible measures for the degree of openness of the classroom task structure. We preferred to use an observationally derived (and hopefully continuous) measure rather than the official dichotomous designations, both for ease of multivariate analysis and to reflect adequately the actual structural variability in the working class rooms, all of which were officially traditional rather than open. The ethnographic data gathered by Bossert have been coded

for task structure. However, as these correlated highly in the first year data with our own records from coding teacher communication, and were available for only a subset of the rooms, they were used simply as validations of these teacher data. As is evident from the codes in Appendix A, the teacher communication records included two variables bearing on task structure: the activity in which the teacher was engaged at the time of a communication, and the activity in which the child (or children) was engaged.

Because the child's activity variable was more finely differentiated and reflected the organization of the class at a given time, we used that variable for constructing the task structure measure. We simply took all activities in which the children were doing the same thing at the same time, coding those as traditional; all activities in which children were doing different things (essentially multitask structures, in terms of the relevant literature), coding those as open; and got a score for each teacher of "percent openness" by looking at the distribution of the resulting dichotomy across all clauses recorded. The resulting variable provides a continuous gradation of degree of openness of the observed task structure for all classrooms studied.

Student Thought

In order to assess how students react to norms the teacher tries to impose, children first responded to pictures illustrating conformity and nonconformity to norms for each issue in each domain coded in the teacher statements. To facilitate presentation, issues were divided into "good" books and "bad" books, where the good books concerned doing deeds that one should and omitting deeds that one should omit, and the bad books concerned the reverse. No more than ten issues were included in any one book, with three books

containing 28 issues presented in one session for the good books and three books containing 30 issues presented in a single session for the bad books. The large number of issues was necessary because we wanted to ask about both sides of each norm: doing a bad deed would go into a bad book, while omitting it would go into a good book, and the reverse. The additional issues in the bad books included teasing and tattling, which were side issues not represented in the teacher codes and for which comparable mirror images were difficult to construct. Order of presentation of issues was randomized within one set of books and then kept the same for the second set. Which set was tested first was then alternated within grades, and booklet order was varied according to a Latin Square design to control for possible effects of order of presentation. A sample good and bad book are included in Appendix B, and a full list of the issues used will be presented in the results section below.

Two quantitative measures were included for each issue to tap both cognitive and affective responses to classroom norms. Children were asked to assess how bad (or good) each thing was to do, and then asked to indicate "how they feel when they do" what was pictured. All children had first responded to a training task in which a very bad (good) and mildly bad (good) extra-classroom deed had been depicted and the interviewer had ascertained that they could differentiate the importance of issues. To assess the importance--degree of goodness or badness--of an action, fifth graders drew a line within preset boundaries of 250 millimeters. First graders, for whom such a task was deemed too difficult, moved a marker on a "magic line maker" where a red line was revealed when the marker was pushed. To indicate how they would feel when doing an action depicted, all children marked one of four faces that ranged from neutral to a large frown for bad acts and neutral to a large smile for good acts. Fifth graders were interviewed in groups,

usually of five students at a time; first graders were interviewed individually. Since the fifth graders simply filled out booklets, there was no interference or sharing of answers between children.

In addition, all students responded to a pair of booklets about (7) possible rewards and (8) punishments for classroom acts. Order of presentation was counterbalanced across classrooms so that it was opposite to the order for the good/bad issues. For each reward and punishment children simply rated relative importance.

Because different children might calibrate the scale for importance in different ways, we used a data transformation for the issue importance variable. This transformation uses the lines as measures of relative importance on a child-by-child basis. Indices of importance--degree of goodness and badness--were constructed for each issue by assigning the value of 1.0 to the longest line drawn by each child, and the value 0 to the shortest, with intermediate lengths transformed according to the formula (length - minimum length)/(maximum length - minimum length). For each issue, therefore, average importances reported across children can also theoretically range from 0 to 1.0, and results reported can be read essentially as proportions of the maximum range.[4]

A more developmentally oriented measure of the reasons why children thought the norms important was provided for a subset of the issues. For the first booklet from each set the child rated, the child was encouraged to give up to three responses for why the behavior depicted was good or bad to do. Latin Squares for the good and bad books were staggered such that mirror image books were never presented first in both sequences; thus all students gave reasons for two-thirds of the issues, in either their good or bad book version. Pretests convinced us of the redundancy of asking students about

reasons for each (e.g., why it's good not to fight and why it's bad to fight), both because reasons were essentially identical and because children themselves complained of the redundancy. In analyses presented below, results for issues are then collapsed across good and bad book versions.

The finely differentiated codes initially constructed for the reasons are presented in Appendix C. These were largely empirically derived from precoding a subset of responses, and had an intercoder reliability of .80. From these we collapsed codes into more theoretically meaningful categories, attaining an intercoder reliability between the two coders of .91. Of the six categories thus derived, four pertained to personal consequences: intrinsic consequences to the self (e.g., learning), sanctions (reward/punishment or threat/promise), social approval from adult or peers, and other extrinsic consequences to self (e.g., having to finish work the next day). The remaining two categories were consequences to others and rules stated abstractly (e.g., "it's nice to share").

Given that children could make multiple responses to any item, although relatively few did so, analyses involving reasons must be sensitive to the n. We therefore considered each reason type for each issue as a dichotomous choice by the child--mentioned/not mentioned--and conducted analyses in terms of percentage of children mentioning a particular type of each issue (or domain, in more aggregated analyses).

Consistency measures were also constructed for the variables of importance, affect, and reasons. Since the importance measure was intrinsically continuous and the affect measures could readily be quantified by assigning numbers from 1 to 4 to the neutral to large smile (frown) faces, the consistency between importance and affect can be represented simply by the correlation

between the two within child. These correlations can then themselves be subjected to further analyses to explore structural determinants of consistency. Correlations can also be constructed at varying levels of generality, ranging from across the data set as a whole to within good or bad books, within domains, or within both type of book and domain. Since the reasons were qualitative choices rather than quantitative indices, it is not really appropriate to speak of consistency between reasons and either importance or affect, but it is a simple matter to ascertain whether there is an association between particular reasons and importance or affect scores by performing t-tests for differences between those choosing and not choosing a reason on importance or affect score. This can also be done at different levels of aggregation, as will be indicated below in presenting consistency data.

A follow-up questionnaire in the first year's data gathering then asked children about experimentally manipulated variations of a subset of the norms. From the 28 norms represented in both good and bad books in the earlier questionnaire, 18 were selected for variation. These were chosen to cover the four domains of classroom life and to include issues rated as low and high in importance within domain, based on preliminary analyses of the previous questionnaire. Four experimental versions of each norm were constructed: one a positive act going beyond role expectations, one a positive act that might be considered expected behavior, one a negative act with some excuse or justification, and one a negative act without such excuse. All children were then presented all 72 versions (4*18), plus two versions of another norm ("sharing") for training purposes. Versions were arranged into four booklets, with a shorter first booklet containing the training items plus three norms (12 versions), randomized. The remaining three booklets included five norms

each (20 versions), randomly interspersed. Presentation of the last three booklets was varied according to a Latin Square to allow for tests of order effects. Children responded to three questions about each version: whether the actor should or should not have done the act in question, whether the actor deserved any praise or punishment, and what praise or punishment should be given (with a subset of praises and punishments presented in the first questionnaire provided as choices). The "should" item yields a seven point scale, the "desert" item an eleven point scale, and the sanction choice item twelve categories of choices. Appendix D presents the overall list of issues and versions plus a sample booklet to illustrate how children made their choices. Fifth graders filled out booklets in four sessions of large group or whole class administration, while first graders did so in small groups. In both cases an experimenter was present to read the questions.

Analyses of the second questionnaire per se (hereafter referred to as the responsibility questionnaire) can therefore take the rather straightforward route of analyses of variance for the scaled items and categorical analyses of praise/punishment. A more elaborate but exciting analysis tool is also made possible by the overlap between questionnaires. Children's own ratings of an issue's importance in the first questionnaire can be substituted in the second, by giving the child's good book importance rating to both good versions and bad book rating to both bad versions; similarly, the child's own rating of the goodness/badness of a praise or punishment can be substituted for the choice of either on each issue. This then yields potentially 72 instances of the punishment fitting (or not fitting) the crime and the reward fitting (or not fitting) the good deed. Transforming the negative acts and punishments into literal negative scores then makes it possible to test for the child's version of justice across good and bad deeds. Possible analyses

include whether children treat good and bad deeds symmetrically, the extent to which children show consensus in judging stimuli, and the extent to which they individually fit a model of justice based on desert. Given that the basic data are the child's within-individual correlation between deed and outcome plus measures of convergence between the child and the average, it is then a simple matter to assess demographic and classroom-related determinants of the degree to which the child's vision of the classroom is one of desert-based justice. (See Hamilton and Rytina, 1980, for relevant adult data and detailed explication of analysis issues.) Preliminary results of both basic anovas on the second questionnaire and justice models using the two questionnaires will be presented below.

Measures of consistency between children's responses to this latter responsibility questionnaire and teachers' responses can also be constructed from these first year data. Of the 18 teachers in the first year sample, 16 returned a packet of questionnaire items given them at the end of the year. The packet included the rewards and punishments rated by the children, the full responsibility questionnaire of 72 versions of the issues, and a questionnaire asking for teacher evaluations of the achievement of each child studied. (This last measure, Appendix E, facilitates assessing differences between students thought by the teacher to be low and high achievers in their judgements of classroom norms.) The consistency measures involve correlations between teachers' responses and the average responses by their classrooms on importance or affect.

The final information regarding children's thought about the student role is provided by a three-part interview conducted in the second year of data gathering. That questionnaire series, reproduced in Appendix F, was developed to assess children's self-perceptions, expectations, perceptions of the teacher,

assessments of the affective and learning climate of the classroom, and judgments of the fairness of teacher instructional and disciplinary practices. Each child was interviewed individually during three different sessions lasting approximately 30-40 minutes. Both open- and closed-ended questions (using a 5-point scale) were included. Analyses of these questionnaires will include both discrete and continuous multivariate analyses, including the construction and use of a number of scales for children's perceptions of self, others, and classroom. Preliminary results will be included in an addendum to this report, as noted earlier.

Children's Classroom Behavior

In addition to measuring aspects of children's thought about the norms involved in the student role and about their own specific performance and classroom, we also have observations of behavior for a subset of the children in each year of data gathering. In the first year of the study, a pilot observation was conducted on 40 children, with an attempt to concentrate on students that teachers indicated were particularly "good" or "problem" students across several rooms. Each child was observed for a total of 3 hours, with verbatim records taken of conversations with teacher or peers as well as accounts of activity in five-minute spans. Review of these procedures then resulted in improved recording during the second year's effort, but with the benefit that the relatively verbatim record makes it possible to recode first year data to fit any modified second year schemes.

Of the 158 children in the second year sample, a subset of 88 (8 children from each of the 11 rooms) were selected for behavioral observation. This subsetting was necessary in the interests of economy and of not maintaining an overly intrusive presence in the room. The 88 were chosen on the basis of

prior participation in the first year of the study and consultation with the teacher regarding children of interest. Particular efforts were made to obtain children designated "excellent" or "poor" by the teacher in terms of either academic performance or conduct, but a (disproportionately small) number of average children were also selected for observation. Thus the 158 children interviewed represented a full range from excellent to poor students, and the subset of 88 was skewed toward children at the extremes. Unfortunately, three students were dropped from the sample due to excessive absence, so that we were unable to sample their classroom behavior adequately.

Each of the subset of 85 children was observed for a total of 2 hours. The observations were conducted during academic work times, especially math and reading periods; activities like show-and-tell and art were excluded. No child was observed for longer than twenty minutes at one time. Since we were particularly interested in teacher academic feedback, we concentrated our efforts on reading groups, during which this feedback is most likely to occur. In those classes that used reading groups, each child was observed during two reading sessions. In those that did not, we tried to be present during any individual reading sessions with the teacher or during periods like conferences when feedback typically was provided.

The purpose of the observations was to characterize the child's behavioral and verbal interaction with teachers and other classmates. Codes similar to those of Brophy and Good (1974) were used to record (a) the frequency and quality of academic and behavioral (managerial) feedback from teachers and peers; (b) the frequency and quality of instructional interaction with the teacher--such as getting help; (c) the frequency of personal interaction with the teacher. Peer interactions coded concerned (d) seeking and giving help, (e) social comparison, (f) negative interchanges like fighting or provoking,

and (g) positive ones like stroking. In addition, (h) personal conversations between peers (labeled social talk) were noted if there were at least four exchanges among the participants.

For each interaction the following information was noted: (a) actors (teacher-child, child-peer), (b) initiator (teacher, child, peer), (c) activity in which the child was involved (e.g., seatwork, small group, class recitation), and (d) activity in which the teacher was involved (e.g., class recitation, small group, checking individual work, or uninvolved but available). This background information was noted during the observation and a short description of the interaction was written. Later the description was categorized for domain - academic, social/procedural, personal - and type of interchange.[5] (For instance, a description such as "Bill went to the teacher with paper in hand and asked how to spell a word. The teacher spelled it for him," would be coded as child seeks help, teacher gives help. The domain is academic.) Obtaining written summaries allowed for checking of coding and enabled us to recapture the nature of interactions for future studies. A total of 3738 classroom interactions were recorded, with a mean per child of 44 and a range from 7 to 124.

Summary

A brief summary of the data sources available from each year of the study is provided in Table 1, along with an indication of its role as an independent or dependent variable for most analysis purposes. As indicated above, the primary emphasis in this final report will be placed on teacher communication and child perception data from the first year's data, with subsidiary addenda on child behavior data and on children's perception data gathered in the second year. The first year's data alone provide at least a substantial step toward answering our initial questions about the shape of the student role as communi-

cated by the teacher, as perceived by the child, and as shaped by structural forces within the classroom or impinging from the larger society. Let us now turn, at last, to answering those questions.

Insert Table 1 about here.

Results

Overall Flow of Teacher Communication

The overall flow of communication averaged 585 clauses per classroom, ranging from 270 to 1126 clauses. This communication was largely reactive, negative, and procedural in nature. Fully 78% of the clauses occurred after rather than before student behaviors. Evaluative tone, which could be positive, negative, ambiguous, or not applicable (for "before" statements), was 49% negative to 28% positive. Salience of remarks, however, was low, indicating that the degree of affectivity displayed by the teacher was slight; fully 98.5% of all clauses were rated as of low salience. A majority of the overall communication was procedural, either academic (31%) or social (26%), with a smaller proportion devoted to academic performance issues (41%) and a miniscule proportion devoted to social/moral concerns (2%).

Characteristics of communication varied dramatically between domains. Academic performance was heavily reactive (98%), academic procedure least reactive (53%), and the other domains intermediate. This is predictable given that performance communication by definition is primarily after a behavior, while academic procedure communication tended to be linked to instructions about work. More interestingly, the evaluative tone also differed dramatically, with academic performance standing out as only 30% negative, in contrast to the predominantly negative tone of social procedure (76%) or social/moral (81%) communications. This combination suggests in part the obvious point that

reactivity per se should not necessarily be characterized as negative or bad, but may be an inevitable part of the domain in question.

From the viewpoint of attribution or social learning theories, the presence of clauses that communicated further socializing information -- expectations, attributions, or sanctions -- might be of equal importance in predicting effective transmission of the student role. For convenience in discussion, we will refer to these types of communication as informatives, although they in fact simply embed further information of a theoretically relevant nature. A small proportion of the role-relevant communication, only 14%, consisted of informatives. This ranged from a low of 5% to a high of 27% of all clauses recorded, yielding a total ranging from 22 to 126 informatives for 10 hours of observation. Particularly given that our universe of communication already excluded social talking and simple instruction, one message of these data is that potentially key informatives occur but rarely in a sea of other speech.

Informatives were dramatically more negative and procedurally-oriented than was the overall flow of socializing communication, although they were about equally reactive. An overwhelming 71% of informatives were negative, as opposed to 8% positive, in evaluative tone; some 79% occurred after rather than before student behaviors. Procedural concerns clearly dominated, with 37% of informatives devoted to academic procedure and 40% to social procedure, as opposed to 20% devoted to academic performance and 3% to the social/moral domain. Table 2 summarizes comparisons between overall communication and informatives.

Insert Table 2 about here.

Given that informatives were predominantly negative, reactive, and procedural, a further question concerns differences in quality of this information between domains. Table 3 presents comparisons beween overall communication and informatives by domain. It shows that first, significantly fewer informatives are provided in the academic performance domain -- hardly what one would see a priori as beneficial, but probably in fact so given their overwhelmingly negative character. Among informatives, academic performance is again the most reactive and academic procedure the least reactive domain. Somewhat hearteningly, academic performance also again stands out from the other domains in involving dramatically more positive feedback, although positive feedback is outweighed more than double by negative among informatives even in this domain.

Insert Table 3 about here.

Perhaps surprisingly, a single issue dominated the informatives for each domain. Over half of the miniscule quantity of social/moral informatives (57%) concerned respect for others, while over half of the social procedure informatives (51%) concerned talking; nearly half of academic procedure informatives concerned keeping on task (46%), and nearly half of academic performance informatives concerned language content (45%). The dominance of language content over other academic issues may well be a function of our care in sampling reading and writing periods. But the heavy single-issue emphasis in the two procedural domains -- which themselves accounted for 77% of informatives -- would appear to be clearly a "real" result, meaning that over one-third of the overall total of expectations, attributions, and sanctions transmitted simply concerned talking or keeping on task.

Further questions concern the distribution of informatives by types among domains, as well as their breakdown into the finer categorizations actually coded. Table 4 shows the overall distribution of informatives among all categories of expectations, attributions, and sanctions, as well as this same distribution for each domain. Given the large number of categories and the high variation in amount of information by domain, comparisons must be made with care. But a number of differences are instructive. The domain of academic performance shows heavy use of attributions, and these have a relatively positive cast.[6] In particular, negative ability is rarely communicated to students, there or in other domains of communication. The procedural domains show heavier reliance on expectations, with a preponderance of intrinsic (consequences-oriented) communication. Socialization concerning social/moral issues presents possibly the bleakest picture. The exceedingly rare informatives in this area are essentially negative sanctions or extrinsic explanations in terms of rules. Not sanctions in general, it is strikingly clear, <u>are</u> essentially negative.

Insert Table 4 about here.

The initial picture of teacher communication regarding the student role is thus mixed at best. It is reactive, negative, and procedural. Informatives -- expectations, attributions, or sanctions -- occur but rarely, and are even more negative and procedural in emphasis than the overall flow of talk. Socialization concerning the core task of academic performance, although outweighed by procedural communication, does offer the most positive picture; but it is perhaps most honestly characterized as simply less negative than the other socialization that occurs. Since teacher communication may depend, however, on structural

factors, we now turn to an overview of potential structural determinants of teacher communication.

Teacher Talk: Managerial Effectiveness and Task Structure

It is important to note that both managerial effectiveness and openness of task structure are correlational rather than causal variables with respect to teacher communication. As noted in the methods report, our indicator of managerial effectiveness was percentage of communication devoted to academic performance. Thus, as noted, certain comparisons like distribution of remarks among domains are ruled out. But it is also true that features that emerged as characteristic of the academic procedure domain are likely to correlate with "managerial effectiveness" because of the choice of indicator; we shall attempt to sort out the extent to which such findings might actually be part of an overall package of effective management, given evidences from the previous literature. The degree of openness of task structure, in contrast, is defined independently of any of the other measures of interest. It presents a correlational problem only in the sense that a teacher both chooses to operate within a task structure and talks to students. It is thus possible that some (unmeasured) teacher characteristic causes both the selection of task structure and characteristics of teacher talk. We would agree with this argument, although we tend to believe that task structures, once set up, have causal effects in molding what the teacher says and how it is said. To partially sort out this latter correlation/causation question, we also examine differences in teacher talk during more differentiated and less differentiated instructional activity, since all teachers in fact engaged in both open and traditional types of activity this strategy effectively uses teachers as their own controls.

Characteristics of speech in the academic performance domain have already been summarized both for overall communication and for informatives, above and

in Table 3. Academic performance communication was less negative, more reactive, and contained fewer informatives than that for other domains. When the variables are all transformed to percentages for individual teachers, and the n thus becomes 18, only one significant correlate of percent academic performance remains: negativity. Teachers' percentage of communication devoted to academic performance and the percentage negativity of their talk correlated a substantial -.77, highly significant even with teacher as the unit of analysis.

For the measure of openness, we first characterized the various categories of the child activity code as either differentiated, multi-task, or undifferentiated, single-task, with the former considered as open and the latter as traditional. It is then possible either to look at the level of clauses for relationships with other variables or to characterize teachers overall and seek relationships at that level. At the level of clauses, several significant relationships emerged. When the teacher talk was occurring in an open activity structure, it was significantly less negative (43% versus 53% for traditional); more likely to involve academic performance and less likely to involve social procedure (by 11% in each case); and contained fewer informatives (14% to 21%). At the level of teachers' overall percentages, no relationships were significant. For example, although speech occurring in an open activity structure tended to involve more academic performance it was not the case that teachers who had more open classrooms had any significant tendency to emphasize academic performance. Finally, teacher's degree of openness was checked for relationships with grade or social class. Although no relationship was found with grade, there was a significant difference between working and middle class in openness. It is not surprising that working class rooms were significantly less open, given that as noted in the methods section, officially open rooms had been abandoned in those schools prior to the study.

Relationship of Teacher Communication to Target Characteristics

Grade differences. Surprising similarity between first and fifth grades was observed. Overall communication to the two grade levels was about equally reactive. In the first grade positive communication did form a significantly higher proportion of talk, by 62% to 50%, as would be expected from the assumption that first grade teachers are trying to instill rather than enforce already-instilled norms. Teachers differed across grades, however, in what was being instilled or talked about, with emphasis in the first grade on academic performance and social procedures, in the fifth grade on academic procedure. Yet these differences, while statistically significant, were small — suggesting that overall emphasis on procedural issues characterizes both grade levels equally well.

Although informatives were found in roughly equal proportions across grades, and were again about equally reactive, they differed both in again being more positive in the first grade and in the kind of communication being made. First grade teachers provided proportionately fewer expectations than fifth grade teachers (39% to 48% of informatives). When expectations were broken down into extrinsic versus intrinsic (consequences-oriented) types, first grade teachers were also significantly less likely to provide intrinsic expectation information. These differences suggest that the first grade teacher may presume less about what her students can or will understand of their action, focusing more on telling and doing than on explaining, relative to her fifth grade counterpart. Overall, however, grade had a generally slight impact on the flow of communication or of informatives within that communication.

Sex of student. A much more dramatic socialization difference emerged within classrooms than across classrooms of different grades, with overall communication substantially more likely to be made to boys (39%) than to girls (29%). The remainer of communication was addressed to small groups or to the

whole group.[7] This imbalance is even more pronounced in looking at informatives only, for 39% of these were addressed to boys as opposed to 21% to girls. Both differences are highly significant.

One question that arises in considering such lopsided communication is the problem that the target of communication may be such for a positive reason (e.g., the teacher likes boys better) or a negative reason (e.g., the teacher finds boys to be behavior problems). Thus we examined overall communication received by boys, girls, small groups, and whole groups to explore its quality and the distribution of concerns addressed. Results, presented in Table 5, indicate that reactive communication was addressed heavily to individuals, although about equally to boys and girls. There was a slight but not overwhelming tendency for boys to receive proportionately more negative feedback than girls, a difference that may be explicable in terms of the concerns addressed to the two sexes. Girls received an appreciably higher proportion of their communication regarding academic performance, while communication to boys involved more of both procedural areas. As we have already seen academic performance communication tends to be more positive than that about procedural concerns.

Insert Table 5 about here.

The picture of informatives for boys and girls resembled that for overall remarks. Informatives were again almost identically reactive, but more similar in their negativity than was true of overall communication: 81% of informatives to boys were negative in comparison to 78% to girls. Distribution of these informatives among domains was somewhat more skewed, with girls receiving an even higher relative proportion of their informatives about academic performance (37%)

than was true for boys (22%). Given these differences in concerns addressed to the two sexes, it is not surprising that only 17% of the negative informatives addressed to boys concerned academic performance, in contrast to 33% of the negative informatives to girls. The kind of information provided also differed in congruent ways. Comparing the overall distribution of informatives among expectations, attributions, and sanctions, girls proved to receive proportionately more attributions among their informatives (40% versus 28% for boys). This is also not surprising given that attributions were found earlier to be concentrated more heavily in the academic performance domain.

Overall, these data resemble those from our pilot investigation (Blumenfeld et al., 1977, 1979). The striking difference in teacher handling of girls versus boys lies in the amount of attention paid to them in the first place. Within that background fact, there are relatively more subtle tendencies for girls to receive academic performance communication disproportionately, and quite slight evidence of more positive communication to girls. Teachers do not appear to be attending to boys because they are disruptors -- although of course they might be attending to boys so as to prevent them from becoming disruptors.

Social class. In contrast to those for grade or sex, the effects of social class on teacher talk can be readily summarized: there were almost none. The sole difference of any import found is a tendency toward more sanctioning -- which essentially means more punishing and threatening -- in the working class schools. Some 34% of informatives were sanctions for the working class, while the percentage for middle class schools was only 24%. Although managerial effectiveness was uncorrelated with social class, recall that openness was substantially related to class. Thus we examined the relationship between class and distribution of informatives controlling for whether the teacher communication occurred in an open or traditional structure. The class difference proved to hold only during

traditional communication (which occurred to some extent in all rooms). Thus with the caveat that it is limited to traditional communication, this sanctioning difference would appear to be a "real" social class difference. But the overall similarity in teacher communication to working and middle class students is far more impressive than this one rather slender difference.

Children's Thought about the Student Role

The student role as communicated by teachers during our first year's observations is one of conformity to procedural demands, enforced through largely reactive and negative means, and rarely accompanied by further informatives that might guide internalization of classroom norms. Structural differences in this communication were relatively few, with the effects of our indicator of managerial effectiveness and the differences in attention paid to boys versus girls standing out in a general picture of cross- and within- classroom similarity. The issues then remaining concern students' perceptions of the norms of classroom life, the ways in which they interrelate these perceptions, and the ways in which perceptions are shaped by structural forces. Perceptions include what children think about the relative importance of the domains of classroom life or issues within them; how they would feel if they met or failed to meet expectations; and what reasons they give for the importance of these norms. A further issue in norm perceptions concerns children's evaluations of responsibility and rewards or punishments for hypothetical examples of such norms. Consistency issues include the relatively conventional question of association between such variables as importance and feelings, as well as the more theoretically motivated question of whether children's judgments of importance match up with their administration of reward and punishment according to a model of justice norms. Potential differences in both children's perceptions and their consistency on the basis of structural variables include differences based on child's grade, sex, or

social class and those based on teacher's managerial effectiveness or task structure.

Importance and feelings. Table 6 presents average importance and feelings ratings summaries for each issue as well as for each domain overall, separately for good and bad books. Grade differences, also presented here for convenience, are discussed below. In examining results or in particular in comparing importance and feelings data, recall that the measure of importance is a transformation of the continuous line data that ranges between 0 and 1.0; feelings data represent assignment of numbers, ranging from 1 to 4, to neutral face through large smile (or large frown) stimuli.

Insert Table 6 about here.

Certain general patterns appear across domains, as well as, predictably, differences among domains. A first general pattern concerns how students react to meeting an expectation ("good books") versus failing to meet one ("bad books"). Overall averages for good versus bad books show, across all domains, that children rate it to be better to meet an expectation than it is bad to fail at one. In addition, they are consistent in rating that they would feel more good in meeting a role expectation than they would feel bad in failing to meet one. This pattern is somewhat surprising, given that such a high proportion of teacher communication concerns essentially the "bad books" version of issues; in addition, children are supposed to absorb learning about doing and not doing "bads" earlier than they do about "goods" (Keasey, 1978).

Relative importances of the domains show clearly that the domain receiving least emphasis in the classroom -- that of social/moral issues -- is the most important one, at least by the criteria of how children responded to these lines

and t ces measures. This both again illustrates children's ability to distinguish moral from other issues (e.g., Turiel, 1978) and suggests that moral concerns might be most fruitfully considered as outside the student role per se. They are something that is learned in the child's daily life, rather than in the classroom itself, and are carried into the classroom as into any other setting the child encounters.

Responses within social moral issues do suggest clues to how different types of norms may be learned. In this domain there are clear distinctions between issues where children are taught "thou shalts" and issues where they are taught "thou shalt nots." Norms like comforting another, sharing, including others, and playing fairly call for the commission of behavior. Norms about such issues as aggression, lying, and cheating, in contrast, call for the omission of behavior. For the commission norms here, children consistently reported that it was more good to do the act than it was bad to omit it; for the omission norms, they reported that it was more bad to do the act than it was good to omit it. There could be a variety of reasons for this pattern of differences, including the perceptual and conceptual simplicity of human action (versus inaction), as well as possibly the reinforcement patterns employed for the different types of norms. In any case, the overall result that "good books" tended to receive generally higher ratings than "bad books", discussed above, may be a function of the fact that most classroom norms are either clearly commission norms or ambiguous rather than omission norms.[8]

The three domains specifically related to class oom life look very similar with regard to how good it is to meet an expect tion. Teachers' relative lack of emphasis on academic performance may be reflected in the results for the bad books that it was rated least bad not to fulfill academic performance norms,

and that children indicated they would feel least badly about not doing so. Norms in this domain are also clearly and uniformly commission norms, however, while some norms in the two procedural domains are ambiguous or omission norms. Thus it is not entirely clear whether to attribute such results to the domain of activity or to the type of norm involved.

Among the procedural issues, one essentially "moral" norm stands out: persistence, trying to do one's academic work. Weiner (1979) has suggested that effort is seen by children as a moral imperative. It is clear that children here perceived persistence as the best of the academic or social procedural activities when fulfilled, and failure to persist as the worst violation; their feelings data were congruent with these importance ratings. These patterns suggest that Weiner's argument is correct.

Group differences in importance and feelings. The one truly overwhelming set of group differences was already presented in Table 6 above: the consistent difference between first and fifth graders. For every norm except cheating and stealing, first graders rated the actions as more extremely good or bad and indicated that they would feel better or worse, respectively, than was true of fifth graders. Grade differences on lines for importance might possibly be attributed to use of a different measuring instrument, as described in the methods section above. But the congruence of the reactions for feelings suggests that first graders were simply reacting with greater conformity to any and all norms. This pattern is consistent with our cognitive development-based expectation that responses of first graders would be less discriminating and more global.

Many fewer differences emerged between boys and girls or working and middle class students, and in both cases they tended to involve ratings of feelings rather than importance. For both of these variables tests were made using

regressions with grade controlled by entering it first hierarchically; the interaction of each variable with grade was also entered, and will be discussed where significant. Tables therefore report partial correlations rather than means for both sex and social class. Because there are multiple non-independent statistical tests made for such data, we adopted the decision rule that issues only be examined individually when the overall summary variable for the area showed a significant group difference. (This rule was obviously unnecessary for grade differences, where nearly every test was highly significant.) Table 7 shows the results that emerge for sex differences using this selection criterion.

Insert Table 7 about here.

The consistent patterns of sex differences emerge in response to the bad books only, and involve feelings only, in the academic procedure, social procedure, and social/moral domains. Results are quite easy to summarize: Girls always reported that they would feel worse about violating the norm. The other dozen-odd scattered significant effects, for lines or for faces in the good books, might not be ones that could be individually trusted; but their pattern was also consistent with that found for feelings, in that girls always reported that it was better to fulfill an expectation and that they would feel better doing so, or worse to fail an expectation and (as shown) that they would feel worse. Thus sex differences are simply sharpest with regard to feeling bad about norm violations.

The pattern of sex differences bears no direct relationship to the differential treatment the sexes received from the teacher. Girls reported greater conformity to the norms, despite receiving much less socializing attention than that received by boys. Girls were also most different from boys in the social/moral

area, at least as indexed by number of significant differences found, and that area barely appears in classroom life. They were least different in the area of academic performance, the domain where teachers target the highest proportion of effort at girls. In general, evidence from student thought about the role supports a relatively "sugar and spice" picture of girls — certainly more so than is true of the teacher talk data, and in ways not particularly consistent with it.

Surprisingly, there were more significant differences between working and middle class students than between the sexes. These were also primarily concentrated in the feelings ratings, as Table 8 shows, but did involve importance ratings for both good and bad books in the academic performance realm. In contrast, for feelings ratings there were significant class differences in six of the eight possible areas, everywhere except in the good books for academic performance and procedure. Results can be readily summarized, as they were consistent across all tests: Working class children always indicated it was better to meet a normative expectation and that they would feel better doing so, or that it was worse to fail an expectation and that they would feel worse doing so. Thus despite little if any evidence of differential socialization by teachers, working class children -- even more so than girls overall — exhibited greater conformity to the norms involved in the student role.

Insert Table 8 about here.

A couple of interactions between social class and grade level did emerge. For the social procedure bad books, the working class children gave higher importance ratings in the first grade, while in fifth grade the two social classes were essentially equal. For the social/moral bad books, there was a reversal such that in the first grade working class children gave higher importance ratings;

and in the fifth, middle class children did so by a very similar margin. These patterns give some indication of reduction with age in working class conformity to the norms in question, but do not involve the feelings ratings where most of the class differences lie.

Reasons for ratings and group differences in these. Six categories of reasons collapsed from the original coding scheme can be examined for patterns across areas of classroom life and for group differences in utilization. As noted in the methods section, two reason categories were relatively intrinsic, those labeled intrinsic and welfare; four were relatively extrinsic, those labeled extrinsic social, extrinsic other, reward/punishment, and rules. Thus in addition to examining patterns by specific reason type it is also possible to construct a composite intrinsicness index. Below we will present associations, and in the following section consistency measures, both for the reason types considered separately and for a composite index.

Table 9 presents percentages of children mentioning a particular reason type for each issue, arranged by domain of classroom life. The table also indicates the presence of significant group differences, which will be discussed after obtaining an overview of the general patterns by domain. It is clear from the table that certain types of reasons tend to cluster in domains, as evidenced by high proportions of children mentioning a particular type in one domain versus another. Among the intrinsic reasons, those labeled intrinsic show their consistently heaviest mention in the academic performance and procedure areas; those labeled welfare (for welfare of or consequences to others) are appropriately concentrated in the social procedure and social/moral domains. Extrinsic social reasons (essentially social approval), like welfare reasons, are found primarily in the social domains. Extrinsic other reasons -- which were frequently of the "you have to do your work over" or "you'd miss recess"

variety -- emerge most consistently, and again appropriately, in the procedural domains, both academic and social. Reward or punishment as a reason is offered most consistently in the two procedural domains. Its use is highly variable in the social/moral domain, but in a pattern which suggests a distinction between adult-defined offenses and those against peers: with heavy mentions for aggression, lying, cheating, and stealing, in contrast to the peer issues of comforting another child, sharing, tattling, or teasing, with playing fair in an intermediate position. Rules, finally, are offered with greatest frequency for social/moral issues, followed by social procedure issues. The overall differentiation of reasons by domain is both sensible and informative regarding differences between issues within domains, as in the case of use of reward/punishment reasons for social/moral issues.

Insert Table 9 about here.

The fact that the group differences noted here are for raw mentions of reasons type forces us to a cautionary note, given first the fact that children were allowed to mention up to three reasons and second the fact of the sheer number of tests involved. Thus we shall merely present broad patterns of differences where these appeared, and then reconsider the question with further statistical controls below. For example, grade differences appear quite sweeping, involving all reason types to some extent. For reasons labeled intrinsic and welfare, these differences are all consistent: fifth graders always mention the reason more frequently. But out of 25 significant grade differences among the external reasons, fifth graders also mentioned these more frequently in 18 cases. This would be surprising given the expectation of greater internality with further cognitive development if we

did not remember the possibility of variation in numbers of reasons--and that fifth graders may be mentioning more reason types across the board simply because they are more verbal. For the much smaller number of sex differences, there are enough consistent patterns (by a criterion of covering at least three issues) to discern an effect for three types of reasons. Males mention reward/punishment and other extrinsic reasons significantly more, while females mention rules. Social class differences emerged a relatively large number of times, although less frequently than grade differences, and with two striking patterns. All of the eight significant class differences for intrinsic reasons showed the middle class children mentioning them more, while all of the 15 significant differences for mention of reward/punishment showed working class children making more frequent mention.

Of these sets of patterns, the most pervasive group difference--and the least clear in meaning--is that for grade. Consistent differences appear for intrinsic reasons, with fifth graders showing more mentions, but with a large number of extrinsic reasons also showing fifth graders predominant. The most unimportant group difference would appear to be sex, both in that few differences were significant and in that those significant differences were all concentrated among extrinsic reasons; boys apparently tend to offer more personalized extrinsic reasons, the extrinsic social and reward/punishment categories, in contrast to the girls' impersonalized rules. The class differences, intermediate both in terms of number of significant findings and clarity of the differentiation, suggest a middle class intrinsic versus working class extrinsic tendency.

The most important potential confound in these results is the number of reason types the child offered. Reasons were coded such that, although the child could offer up to three reasons, only different reason types were coded;

two intrinsic reasons in a row, for example, would receive a count of one. Thus it is the diversity as well as the sheer volume of response that is at issue between groups. Comparisons by issue for grade, sex, and class differences showed that both sex and class effects previously reported stand unconfounded by the number of reason types offered. Of the thirty issue comparisons for each of these variables, there were a trivial two sex differences and one class difference on number of reason types. In contrast, 29 out of 30 comparisons were significant for grade, with fifth graders always offering more reason types. The diffuseness of the earlier significant findings for fifth grade mentions of reasons is thus partly a function of the volume and diversity of their responses.

Since the key substantive issue in any of these comparisons is the relative intrinsic versus extrinsic nature of the response, one attractive way of providing appropriate controls plus making the crucial group differences tests is to construct a measure for overall intrinsic versus extrinsic response. Although there are a variety of ways of doing so, one method which also controls for number of different reason types offered is to construct an index of intrinsic responses minus extrinsic responses divided by intrinsic responses plus extrinsic responses. Group differences on such an index cannot be a function of number of reason types offered. Further, such an index can provide a convenient summary measure for additional further analyses, such as those involving consistency or those exploring teacher impact on children's responses.

Results for group differences on the summary measure of intrinsicness in fact identify the true significant patterns in the above raw data. In a hierarchical regression with grade entered first, followed by sex and class, grade proved to be a highly significant predictor of intrinsicness

(partial r = .29, p <.0001); sex was not significant, while social class was also highly significant (partial r = .20, p = .0002). Fifth graders were indeed more intrinsic with a control for number of reason types, and working class children were indeed more extrinsic. Since the sex differences previously found were all within extrinsic categories, we would not expect any intrinsic-extrinsic differences to appear here.

Before turning to direct tests of consistency among measures, it is noteworthy that these patterns of intrinsicness already point to certain interesting divergences. Although fifth graders proved significantly more intrinsic in reasons offered, they also earlier emerged as consistently rating conformity to norms as less important and themselves as feeling less good about conformity and less bad about nonconformity than first graders. Thus the intrinsicness of one's reasoning about an issue is no guarantor of one's evaluation of it or one's feeling about it. Similarly, working class children both gave more extrinsic reasons than middle class children and, where they differed at all, rated normative conformity more favorably and their feelings as more intense. The supposedly more internalized (intrinsic) response need not be the most intense nor need it be accompanied by greater normative or behavioral conformity. It may even be accompanied by less.

Measures of Consistency in Child Perceptions

Importance and feelings. The basic indicator of consistency between importance and feelings ratings is the within-child correlation between the two. Such within-child correlations can be calculated at several levels of generality, given the fact that 58 stimuli were evaluated. As indicated by the summary in Table 10, we assessed consistency overall, across all good stimuli, across all bad stimuli, within each domain, and for good and bad

stimuli respectively within domains. The table presents the results from regressions in which we tested for effects of grade, sex, and social class on these consistencies. Looking first at the general results irrespective of demographic differences, several interesting patterns emerge. The general level of consistency is quite substantial, particularly in the light of the restricted range of choices available for the measure of feelings. Consistency is higher, however, for bad stimuli than for good ones, possibly as a function of the more extreme scores already noted for good ratings of both importance and feelings, if these essentially yielded ceiling effects. Domain differences are more unambiguously substantive, with lower consistency for academic procedure than for the other areas of classroom life. Probing why this might be the case then moves the inquiry into the area of demographic determinants of consistency.

Insert Table 10 about here.

The most striking difference in consistency, a predictable one, is that between first and fifth graders. All consistency measures, from the most general to the most specific, show higher consistency for fifth graders. Social class differences are less ubiquitous and less powerful, but they are still both common and themselves internally consistent, with working class children always appearing more consistent whenever there is a significant class difference. This class effect appears primarily due to ratings of the good stimuli, but encompasses all domains except for academic procedure. When the domains are broken down into their good versus bad stimuli, class differences are revealed in the good and bad stimuli for the social procedure domain, in the good stimuli for both academic performance and social/moral

domains, and in neither set of academic procedure stimuli. (In general, we would expect fewer significant results among the breakdowns by both stimulus type and domain, in light of the smaller number and range of stimuli for which the consistency correlation is being calculated.) Despite a virtual absence of sex differences in consistency, the sole significant difference provides a clue about the previously noted lower consistency in the academic procedure domain; for there is a sex difference in consistency there, with boys showing lower consistency than girls. Although the regressions comparing the sexes for good and bad academic procedure stimuli separately show no significant sex difference, as shown in Table 10, examination of average academic procedure good and bad correlations for boys and girls and their relationships to the other consistency correlations revealed that for boys, the consistency of the academic procedure good stimuli is distinctively lower than that for other domains; for girls, consistency is more even across domains. Among the bad stimuli, both sexes showed less consistency in the academic procedure and academic performance domains than in the other two. Thus the "something special" about academic procedure that renders it an area of lower consistency between importance and feelings appears to be the responses of boys to that area, and particularly to the good stimuli presented in it.

Overall, then, a substantial amount of consistency in ratings of importance and feelings was revealed, tempered by findings of differences between good and bad stimuli, among domains, and between demographic groups. The most striking demographic result, the general pattern of greater consistency for fifth graders, was also in a sense the least informative. In contrast, the class differences in which working class children appeared more consistent were concentrated to some extent in the good stimuli,

an area of overall greater consistency; and the only sex difference emerged in the academic procedure domain, with boys less consistent, possibly providing an explanation of the distinctively lower consistency in that domain.

Reasons. The relationship between reasons offered for the importance of issues and either their importance or the feelings attached to them is, as noted above, not truly a question of consistency; instead, it simply indicates whether there is some association between a particular reason type and the assessment of importance and feelings. The only associations that were anticipated were possible links between the intrinsic nature of a reason given and an issue's importance or feelings, with the expectation that reasons of an intrinsic type would be associated with ratings of greater importance or feelings; in contrast, we expect lower importance or feelings ratings for reasons of an extrinsic type. First associations between the six reason types for each issue were assessed separately for good and bad versions of the issue, by regressing the importance or feelings score on each reason type in an equation with grade entered first, followed hierarchically by the reason (scored as chosen/not chosen) and the grade-reason interaction. Grade was used as a control because of its already-demonstrated importance in determining importance scores, feeling scores, and the consistency between the two.

Limited evidence of any association between any particular reason type and either importance or feelings was found. Out of a total of 348 regressions (28 good stimuli and 30 bad stimuli for six reason types), importance scores were significantly different for only 14 main effects of reason type and eight interactions of reason with grade--well within what might be expected by chance, particularly considering that the reason types

were not completely independent, given the limitation of three answers per issue that was imposed. The only consistent pattern found was, however, in the anticipated direction in that four effects of intrinsic reason on importance rating all showed a higher importance rating associated with choice of an intrinsic reason. Only slightly more pattern emerged in the associations for reason type and feelings ratings, with a total of 21 significant main effects of reason and nine interactions; again, given the 348 not fully independent tests, hardly striking evidence of any linkage between reasons and feelings. But eight effects of rule emerged, all in the direction that choice of rule as a reason was associated with higher feelings scores. This pattern, albeit weak, is somewhat noteworthy both because it runs counter to our initial prediction and because the weak patterning found for importance ratings ran in the opposite direction.

More conclusive answers are possible, given the apparently weak-to-nil relations between reasons and either importance or feelings, by turning to the summary index of intrinsicness. Use of that index makes possible two sorts of consistency check: first, a direct check for a link between intrinsicness and either importance or feelings ratings; and, second, an assessment of whether intrinsicness is itself associated with greater consistency between the other two measures, using the correlation between intrinsicness and the previously derived importance-feelings correlations.

Any direct link between intrinsicness of a reason and either the rated importance of a norm or the associated feeling proves to be absent. When grade is controlled, intrinsicness is uncorrelated with any of the eight summary measures (by domain and by good versus bad stimuli) for either importance of feelings. (Without grade controlled, there are a number of apparent linkages of intrinsicness to lower importance or feelings,

resulting from the fact that intrinsicness is correlated with grade which in turn predicts to both lower importance and lower feelings.) Thus the small number of somewhat inconsistent findings noted at the level of individual reason types can essentially be ignored.

Similarly, intrinsicness proved unrelated to any importance-feelings consistency measure. While this finding serves to clarify the picture of the role intrinsicness plays--i.e., it is not linked in any way with consistency of response--it also illustrates that the demographic variables can have quite distinctive effects on different aspects of the data. Although grade powerfully predicts both the consistency correlations and the intrinsicness of reasons, the two are themselves unrelated.

Effects of Teacher Talk on Student Thought

Thus far we have seen a series of differences between children's judgments of the importance of classroom norms, their reasons for these judgments, and their feelings about them, differences that bear but little relationship to any patterns uncovered in teacher talk itself. One natural question, then, is whether any aspects of teacher communication do affect children's views of the student role. Given the theoretical foundations in social learning and attribution theories, a number of possible candidates for appropriate "aspects" emerge. The reactivity of the communication is not particularly appropriate, given, as we have seen, that it can be simply a part of a classroom activity--like feedback about academic performance--rather than really serving as an indicator that the teacher is failing to shape behaviors. The negativity of communication is a much more plausible candidate, but given its correlation with the teacher's emphasis on academic performance, it is more reasonable to consider negativity as itself an effect of the manageable variable.[9] We are then left with aspects of the

informatives provided by teachers as possible determinants of children's thought about the student role. It is to these that we then look for teacher effects.

Information per se would be a category so broad as to be useless, for results showed that informatives of different types were distributed across the domains of classroom life in very different patterns and were also of differential negativity. Thus we chose to look at three different indices for informatives: the teacher's percentage of attributions provided in the academic performance domain, for that was where attributions were concentrated; and the teacher's percentage of expectation and sanction information in each of the academic procedure and social procedure domains, for these domains were where expectations and sanctions were chiefly found. In addition to controlling for domains involved, this division also separates a relatively positive category (attributions) from the more generally negative expectation and sanctioning information.

Importance and feelings. These information measures were first regressed on each of the measures of perceived importance or feelings separately, using hierarchical regressions in which grade was entered first, then the information measure, and finally the interaction between the two. Again the decision rule was employed to look at specific issues only when a variable had an effect on a summary variable (such as "good books" responses for academic performance). Table 11 presents the results of these regressions for all three variables for the importance data only, given that there were generally many fewer effects on children's feelings ratings. Where there were significant relationships to feelings, these will be discussed below in text.

Insert Table 11 about here

As Table 11 reveals, the effects of the teacher's percentage of attributions in academic performance were quite specific to academic areas, and within those, to judgments of the good books or meeting of normative expectations. There was an overall positive relationship for the academic performance domain itself, tempered by an interaction between percentage of attributions and grade; examination of that interaction revealed that there was no impact of attribution percentage in the first grade, but only in the fifth grade. In the good books for the academic procedure domain, only an interaction with grade emerged. Examination showed that it was similar to the previous interaction, in that there was a negligible negative effect of attribution percentage in the first grade and a substantial positive one in the fifth grade.

The most dramatic news in these analyses of teacher information, obvious from Table 11, concerns the difference between the impacts of expectations and sanctions from the two procedural domains. Although we have seen that the realm of academic procedure is a relatively negative one, and there is no reason to believe that the expectations and sanctions being tapped by the present variable differ from those in the social procedure domain in this respect, they have opposite effects on children's ratings of importance. Expectations and sanctions in the academic procedure domain, as a percentage of overall communication in that domain, had simple positive relationships to children's importance ratings for both academic performance and academic procedure. The chief difference from the pattern for attributions is that the expectations/sanctions variable affected ratings of the bad books,

or failures to meet normative expectations, rather than the good books. In addition, there was also a significant relationship to ratings of the faces, or feelings data, for the academic procedure bad books. Attributions, in contrast, had no relationship whatsoever to feelings ratings.

Percentage of expectations and sanctions in the social procedure domain, in contrast, had quite diffuse effects on children's ratings across all domains. For academic performance, both good and bad books, there was a negative effect of teacher's percentage of social procedure expectations/ sanctions on children's ratings. In the academic procedure realm, a similar main effect appeared for good books, plus an interaction with grade; similarly to the previous interactions, this now indicated that there was a bigger negative relationship in the fifth grade than in the first. In social procedure itself there were again relationships with the good books, both a main negative effect of expectation/sanction percentage and an interaction with grade. The interaction again involved a larger negative relationship in the fifth grade than in the first. Results for the social/ moral domain showed the only difference from the general pattern at all, in that an interaction with grade was the only general effect in the importance data; that interaction showed no effect of social procedure expectations/ sanctions in the first grade, and a negative effect in the fifth. Further, the only relationships to feelings ratings appeared in this area, for the bad books--and involved a different interaction, with a small negative relationship in first grade and no relationship in fifth grade. Given that this was the only link of this variable to feelings ratings and that the pattern differed from that of all the other interactions--which each showed larger negative effects in the fifth grade--the results should probably be discounted. Even including it in the overall pattern, that pattern clearly

involves a negative impact of teachers' use of expectations or sanctions in the social procedure domain: The more those were used, the lower the children's importance ratings of a whole series of norms across the full range of norms tapped. Further, this relationship was generally stronger, and sometimes appeared at all, only among fifth graders.

Overall, then, teachers' use of attributions in the academic performance domain had a positive impact on children's importance ratings of academically-related norms. This is reasonable given that such attributions are both informative per se and, as we have seen, relatively positive in tone. Surprisingly, use of expectations and sanctions in the academic and social procedure realms had divergent effects on children's ratings, with academic procedure expectations/sanctions relating positively to ratings in the two academic domains and social procedure expectations/sanctions having diffuse negative effects on ratings. In general, however, all three teacher communication variables affected almost exclusively importance rather than feelings ratings, in contrast to the effects especially of sex or social class on judgments. It would appear that the more cognitive measure was more susceptible to teacher influence, while the more affective measure was more closely linked to differences children import to the classroom.

Reasons. Simpler tests were possible for the association between aspects of teacher communication and intrinsicness of children's reasons, given the existence of the summary index for intrinsicness. Three regressions were run, each including grade, a teacher communication variable, and the interaction between the two in hierarchical order. No main or interactive effects of the teacher's percentage of expectations/sanctions

in the academic procedure domain were found. Interesting effects emerged, however, for both academic performance attributions and social procedure expectations/sanctions. A negative main effect of attribution percentage on intrinsicness of reasons was qualified by an interaction of attributions and grade, such that the effect proved negative only among first graders and was absent among fifth graders. In a reciprocal pattern, a positive main effect of social procedure expectations/sanctions on intrinsicness was also qualified by an interaction with grade; the effect of these expectations and sanctions proved positive only among first graders, increasing the intrinsicness of their reasons, but slightly negative among fifth graders.

Taken together, these effects of teacher communication on students' reasons can be viewed as illustrations of the ambiguity of classroom stimuli and the importance of considering the perceiver's processing of information. Attributional information is neither inherently intrinsic nor extrinsic; even "internal" attributions, for example, very commonly refer to the unstable and heavily environmentally controlled area of effort. And expectations and sanctions, as a category, need be neither intrinsic nor extrinsic; many expectations, for example, refer to issues like consequences to others. Thus what may be occurring is that for relatively extrinsic first graders, the ambiguous stimulus of attributional information is interpreted extrinsically and--to a modest but significant extent--further fosters extrinsicness of reasoning. In the social procedure area, in contrast, children in that earlier developmental period may simply respond to the control involved while learning from the intrinsic information embedded. By fifth grade, children may be more sensitive both to the variations in meaning of attributions and to the external control implied in expectations and sanctions.

Teacher communication variables thus prove to be significantly predictive of the intrinsicness of students' reasoning. But the main message of the relationships found appears to be the importance of the child as interpreter of the teacher's messages, with a developmentally-linked "intrinsic" or "extrinsic" filter moderating the meaning and impact of these messages.

Effects of Teacher Structural Differences on Student Thought

Importance and feelings. Either our indicator of managerial effectiveness or the openness of task structure might also affect children's thought about the student role, both because these indicators had some relationship to teacher talk and because they might reflect aspects of classroom life not necessarily captured in our teacher talk measures themselves. Simple direct effects of either variable on importance and feelings were assessed in separate regressions where grade and classroom social class composition were entered first hierarchically; interactions of each with these control variables were also entered, and will be discussed in the text where significant. Interactions between academic performance as a percentage of a teacher's overall communication and percent openness were assessed in an equation in which grade was entered first, followed hierarchically by percentage academic performance and percent open, followed by all interaction terms. These interactions appear in Table 12 below, along with summaries of each set of main effects.

Insert Table 12 about here.

In a pattern resembling that for the teacher talk variables, both of these structural variables had effects on importance judgments only.

The managerial effectiveness indicator had a significant positive effect on all four sets of "good books" ratings, but no effect on "bad books" ratings. For the social/moral good importance ratings there was also a small but significant three-way interaction with grade and social class such that in the first grade, there was an effect of percent academic performance for working class children only; in the fifth grade there was a positive relationship for both social classes. The only effects of percent academic performance on the feelings ratings appeared in interaction with social class, for the academic procedure good books and the social procedure bad books. In the case of academic procedure, the social classes showed no differences in first grade, but in the fifth grade the working class children showed a negative effect of percent academic performance; the middle class children, a positive effect. For social procedure, at both grade levels the working class children showed a negative effect of percent academic performance and the middle class children a positive effect.

Main effects of the percentage of teacher talk occurring in open structures were even more specific than effects of percent academic performance. There were no effects whatsoever on the feelings ratings, and effects on only three groups of importance ratings: those for the academic performance good and bad lines and for social procedure good lines. The most interesting feature of the results is their negative sign, however, for the greater the teacher's degree of openness the lower the importance ratings given to the norms shown in Table 12.

Interactions are what make the results for percent openness truly interesting, however. The only interaction with a structural variable was one with social class for the academic performance bad books; it indicated that in the middle class schools, openness had a positive effect in first

grade and a negative effect in the fifth; in the working class schools, the openness effect was uniformly negative. The key feature, shown in Table 12, was the interactions with percent academic performance (typically also accompanied by three-way interactions with grade). When graphed these showed that in general, when percent academic performance was low, the effect of openness on children's ratings was negative; when percent academic performance was high the relationship reversed, and the effect of openness was positive. This flip-flop pattern appeared more strongly, or only, in the fifth grade, yielding three-way interactions. One way of making sense of this pattern is to suggest that when a teacher is not an effective manager, greater openness may simply mean greater chaos, such that it has a negative impact on children's views of classroom life; when the teacher is an effective manager, greater openness may accomplish some of the benefits its proponents have suggested. Thus effects of task structure need to be considered in the context of the teacher's managerial effectiveness. The fact that this interactive effect for openness appeared only in the fifth grades does, however, lend support to recent cautionary notes about open structures in the very early grades (e.g., Brophy, 1979), in that openness in the first grade simply had negative or at best nil effects on children's ratings.

Reasons. Testing for effects of teacher structural variables on reasons for normative conformity (and against norm violation) differs from testing their effects on ratings of importance or feelings in two ways. Methodologically, given that an overall index of intrinsicness of reasons is available, the resultant tests become substantially fewer in number and easier to interpret. Substantively, the reasons data provide a quite different vantage point from which to assess the impact of openness or managerial efficiency; for we have already seen that the child's ratings of a norm's importance or of feelings about it, while themselves correlated, bear little or no relationship to reasons offered. Inverse patterns can even be found developmentally, such that fifth graders rate norms as less important and feelings less intense at the same time that they are providing significantly more intrinsic reasons for their judgments. Thus there is no a priori basis for expecting the intrinsicness index to reveal the same patterns of structural impact as those found for the other judgments.

Three regressions predicting intrinsicness were run to parallel those already reported for importance and feelings: one regression with grade, social class,percent openness, and their interactions; one with grade, class, percent academic performance information, and interaction terms; and one with grade, academic performance, openness, and interactions. These analyses, whose results are presented in Table 13, show a pattern of small but significant effects of structural variables. The issue is whether these effects, both of which interact with grade, present the same picture of structural impact already painted for the other ratings of classroom norms.

Insert Table 13 about here

The first clue that intrinsicness of reasons may differ from the other evaluations lies in the pattern of main effects of structural variables. The equation for grade, class and openness shows again the previously noted demographic effects, in that older children produce significantly more intrinsic reasons and working class children more extrinsic ones. But further, children in more open classrooms are also significantly more intrinsic in their justifications regarding norms. Managerial efficiency, as indexed by percent communication devoted to academic performance, is not significantly related to intrinsicness of reasons; yet openness is, whether it is in an equation with the demographics or with managerial efficiency. Thus managerial efficiency per se appears to be playing a less important role in determining intrinsicness, and openness a more important role in terms of main effects, than was true for importance or feelings judgments.

Yet, here as before, clarification of how these structural variables affect children's reasoning requires examining the interactions of both with demographic controls. As illustrated in Table 13, openness interacted significantly with grade and, in a three-way interaction, with grade and social class in the first equation. Academic performance communication, in contrast, simply interacted with grade in the parallel equation. Finally, the combination of the two structural variables with grade controlled revealed only the already-noted interactions of each with grade, and no interaction between them. The interactions for openness, when plotted, showed that (a) openness had a more positive effect on intrinsicness in the first than in the fifth grade and that (b) there was also a social class effect in the fifth grade, but not the first, such that working class children showed a more positive impact of openness. Proportionate attention to academic performance, in interacting with grade, showed a substantial positive effect on intrinsicness in the first grade, but a nonsignificant negative effect in the fifth.

Taken together, the impacts of openness and managerial efficiency on children's reasons present a quite different picture from their impacts on importance or feelings ratings. It is important to recall the theoretical and empirical independence of these two structural features of classrooms. From the child's point of view, openness could be said ideally to foster self-determination, managerial efficiency, self-control. It is thus sensible that the general impact of openness is to increase intrinsic reasoning; it is also sensible that this impact is larger among first graders, who are developmentally further behind in attaining such reasoning. Similarly, while a well-managed classroom in itself bears no necessary relationship to the quality of children's reasoning, it may have a more powerful impact toward intrinsicness on those whose need to have self-control instilled is greater.

The overall package of results for these structural variables thus suggests that normative conformity, as indexed by ratings of importance or of feelings, need not be produced by the same variables as intrinsic reasoning about norms, and may even hold opposite relations to those variables. Results for structural predictors of intrinsicness resembled those from the teacher communication variables, in illustrating the dependence of teacher effects on the developmental position of the child. Openness of the classroom, for example, had a bigger impact on reasons in the earlier grade, as had two aspects of teacher communication, in ways suggestive of a developmental difference; and its effect on intrinsicness was positive where its impact on conformity had been negative, nil, or interactive. Thus just as intrinsic reasoning need not be related to normative conformity, it need not be produced by the same teacher communication patterns or classroom structure. And these results again remind us that relations between intrinsicness and other aspects of student thought may well be negative, or at best problematic, rather than

positive. Recommendations regarding teacher practices are thus rendered correspondingly problematic.

Children's Judgments of Responsibility for Good and Bad Deeds

Basic analyses. As indicated in the methods section, children responded to a series of experimentally varied questionnaires about classroom norms after they had indicated their ratings of importance of normative conformity, feelings about deviance, and reasons for conformity. These follow-up questionnaires used a subset of 18 of the issues covered in the initial inquiry and included four variations of each: one exemplifying "extra-good" behavior (going beyond role demands), one good behavior, one bad behavior but with an excuse or justification provided, and one bad behavior without such an excuse. Children were asked about the extent to which the actor should or should not have behaved in the way presented, the praise or blame deserved for the act (responsibility), and appropriate reward or punishment, if any. Preliminary analyses have been conducted for the measure of responsibility. These incorporate, first, the act's experimentally varied degree of goodness or badness and the domain (or particular norm) in question; second, the children's demographic characteristics; and third, to be presented in a subsequent section, the impact of teacher variables and correlation between children's and teachers' responses to these questionnaires. We thus omit here consideration of chidren's responses to the "should" or reward/punishment items, as well as certain complexities in the experimental design that would not affect interpretations of overall results (possible differences between omissions and commissions of good versus bad deeds, and possible effects of sex of perpetrator, which was varied for an overall 50:50 division).

Among the 18 issues, the four domains of classroom life were nearly equally represented, such that the academic procedure and academic performance

domains were represented by four issues each, and the social procedure and social/moral by five issues each. Summary scores could thus readily be produced for each domain, and an initial analysis done to ascertain effects of domain, the four variations in level of goodness-badness, and interaction between the two. A repeated measures analysis of variance was thus conducted for these two repeated measures factors. Table 14 presents the cell means and marginals for children's responsibility ratings. Scores could vary from 1 (very good) through 6 (neutral) to 11 (very bad).

Insert Table 14 about here

Results showed that main effects of both variables and the interaction between them were all significant. The most dramatic effect was that of the goodness versus badness of stimuli ($F=1999.2$, $d.f.=3,1014$, $p<.01$), where the break came between good and bad stimuli; differences between acts designated as "extra good" and those considered good, or between acts considered as bad with excuses and those considered bad, were not significant by post hoc contrasts. Thus the image that emerges is one of a dichotomous world from the child's point of view, where deeds are unambiguously either good or bad, but where variations in degrees of each go unattended. The effect of domain, although much less substantial ($F=35.2$, $d.f.=3,1014$, $p<.01$), was nevertheless highly significant. Planned contrasts (1) between social versus academic domains showed higher average scores for the social domains, which inspection revealed to be due to bad stimuli being rated worse there; (2) between procedural and non-procedural domains, showed procedural to have higher average scores, due to good stimuli being rated as less good; and (3) between social procedure and academic performance versus the other two domains, showed the

former to have higher average scores due to more extreme ratings of bad stimuli. The interaction between domain and goodness-badness, also highly significant ($F=35.7$, d.f.=9,3042, $p < .01$), can be examined in Table 14. It can perhaps most readily be summarized in terms of relative good-bad gaps by domain. Although the social/moral domain revealed the most extreme differentiation between good and bad stimuli, it also revealed the least differentiation within such stimuli; the two academic domains were intermediate in their degree of differentiation between and within stimulus types; and the social procedure domain showed the smallest gap between good and bad stimuli. The pattern for this last domain was an odd one, in that children were highly sensitive to excuses in the bad stimuli, and yet neither rated the good stimuli as very good nor even responded to the distinction between good and "extra-good" stimuli in the predicted direction. This latter pattern, in particular, led us to look more minutely at the responses to norms taken individually in searching for an explanation of the findings.

A parallel analysis done for four levels of the goodness-badness variable by 18 levels of norm then revealed to us an inadequacy in our interpretation of "extra-good" from the child's point of view. Not surprisingly, both main effects and the interaction were again significant. What was of interest to us, however, was any unusually large difference between conditions (and especially anomalous differences) for given norms. In the social procedure domain, two issues (i.e., two sets of four stimuli) had dealt with classroom roles: erasing or not erasing a blackboard, and watering or not watering a plant. The bad versus bad-with-excuse conditions for both showed the two largest differences of all 18 stimuli, possibly suggesting that with a stimulus of a highly socially contingent character children are both ready and able to make the differentiations so generally absent here. More critically,

the two role issues were also the only ones to show a reversal in ratings of the two good conditions, such that merely good stimuli were rated as more good than those that had been designated a priori as "extra-good." In both cases, the latter stimulus had been a child who had not been assigned the role doing it anyway. To us, this appeared as going beyond the call of duty; to the child, however, it seems to have been more likely interpreted as butting in where one hadn't been authorized to do so.

Since it was thus apparent that for at least two of the norms in the social procedure domain we had failed at adequately operationalizing the idea of going beyond role domains, the analysis for domains by conditions was redone using only the non-role stimuli for social procedure, giving a total of three issues to be averaged in that domain. Results proved not to be dramatically different from those already obtained for the full set of stimuli. Most importantly, the dichotomous good-bad nature of the children's judgments remained, with large differentiation between good and bad stimuli in contrast to insignificant differences among either good or bad conditions. Contrasts among pairs of domains revealed that the social domains still showed higher average responsibility assignment, due to more extreme ratings of bad stimuli; and that the procedural domains still also showed higher responsibility assigned, due to less extreme ratings for good stimuli. The sole change for domains was that the contrast between social procedure and academic performance versus the other domains (itself essentially an "interaction" contrast) was not significant. Finally, the interaction between domain and goodness-badness of stimulus, while still significant, differed somewhat as a function of the changes in the social procedure domain. The two social domains showed more overall differentiation between the good and bad stimuli than did the academic domains; in contrast, the academic areas showed more differentiation

among degrees of goodness and badness, especially for bad acts versus bad acts with excuses. Table 15 presents means and marginals for this analysis to parallel those shown in Table 14.

Insert Table 14 about here

The general pattern across these preliminary analyses suggests two key features of children's judgments of classroom responsibility. First, the goodness of an act, its adherence to norms, or the badness, its violation of norms, is of overwhelmingly greater importance in its judgment than either degrees of rightness-wrongness or the domain of classroom life involved. Second, differentiation among features of an act emerges most strongly in those areas most socially contingent or classroom-taught: in the academic areas themselves and, with certain surprises for the investigators, for explicit classroom roles. Both the intensity and the noncontingent character of responses to social/moral norms, in contrast, would seem to reflect their importance as moral, rather than conventional, norms for life inside and outside classroom walls (e.g., Turiel, 1978).

To simplify preliminary analyses for effects of children's characteristics on ratings, we utilized eight dependent variables, consisting of averages for each of the four domains for good versus bad stimuli. In addition to yielding a simple between-subjects analysis, use of these variables provides parallels to earlier analyses involving importance and feelings ratings. Analyses of each for simple main effects of grade, sex, and social class (entered hierarchically) revealed patterns similar to those for the earlier ratings of norms themselves, as illustrated in Table 16. In all eight analyses,

fifth graders assigned scores of lower intensity than did first graders — assigning less praise to good acts and less blame to bad ones. Sex differences emerged in five of eight comparisons, in all cases involving females' rating good acts as more praiseworthy and bad acts more blameworthy; these differences were also heavily concentrated in the social areas, with no boy-girl differences in academic performance ratings or in bad acts for academic procedure. Finally, four social class differences proved significant, with working class children always rating good acts more praiseworthy and bad acts more blameworthy; these differences were chiefly concentrated in the academic areas, in contrast to the sex differences, with more extreme judgments by working class children for both of the academic performance variables as well as for good stimuli within academic procedure.

Insert Table 16 about here

These responsibility judgments thus prove to be a function of children's own characteristics in ways that rather closely parallel the earlier findings for normative conformity on importance and feelings. First graders, girls, and working class children each again reveal greater normative conformity in evaluating individual acts of rule adherence or rule breaking. The pattern for girls is again not particularly consistent with patterns of teacher communication to them, in that sex differences concentrate in the social areas where there is either little teacher communication or little sex differentiation in that communication; in the academic performance area, in contrast, a real difference in teacher communication to the sexes does not translate into a difference in their assignments of praise or blame. Finally, greater

working class conformity to norms again emerges as concentrated in the academic areas, despite an absence of differential teacher communication to suggest why this should be so. In combination with the results now presented for intrinsicness of reasoning, these results indicate that greater normative conformity is found in first graders and in working class children coupled with a more extrinsic orientation toward those norms; but also in girls, without parallel evidence of greater extrinsicness.

Effects of teacher communication and structural variables. The presence of some effects of teacher communication on children's judgments of importance and feelings and on the intrinsicness of their reasoning suggested conducting analyses for their possible effects on children's responsibility judgments. Again heuristically employing the eight summary dependent variables for responsibility judgments across domains and goodness-badness of stimuli, analyses tested for the impacts of percentage attributions in the academic performance domain, of percentage expectations/sanctions in academic procedure, and of percentage expectations/sanctions in social procedure. Each regression used grade, the communication variable, and the interaction of the two entered hierarchically, since grade again promised to be an important control variable. Of 48 possible significant effects (i.e., three variables by eight dependent variables with main or interaction effects possible), only four proved significant — a nearly random rate. However, these effects were concentrated entirely in the academic performance domain — suggesting that, however weak, they were in fact nonrandom and deserving of attention. Table 17 reports appropriate partials for the significant results; three involved interactions with grade, while only one represented a main effect. It should be emphasized that despite the meaningful clustering of effects, all were quite small, especially in comparison with the effect of grade itself.

Insert Table 17 about here

Both teacher's percent attributions in academic performance and expectations/ sanctions in academic procedure affected the child's evaluations of academic performance good stimuli, and these effects were similar. Each interacted with grade such that for first graders, the teacher communication variable depressed ratings of praiseworthiness, while for fifth graders it led to rating the acts as more praiseworthy. This result in some respects resembles earlier effects of these variables: the negative impact of attribution percentage among first graders paralleling its effect on intrinsicness, and the at least partially positive impact of academic procedure expectations/ sanctions paralleling its positive effects on importance ratings. Yet the patterning of the grade interaction for the latter variables lends a cautionary note with respect to interpreting these data, one that is then amplified in considering the role of the social procedure expectations/sanctions variable.

The sole main effect of these teacher communication variables, that of social procedure expectations/sanctions on responsibility for academic performance good stimuli, is seemingly straightforward. Increases in the percentage of social procedure communication devoted to expectations or sanctions lead to lower ratings of praiseworthiness of acts. Given the heavily negative character of such communication, this result appears both consistent with prior results for importance ratings and readily interpretable in terms of children's reactions to a negative classroom climate. Yet from the standpoint of those prior data and that interpretive framework, the final significant result then appears anomalous. For ratings of responsibility for bad acts in the academic performance domain, social procedure expectations/sanctions

had an interactive effect with grade such that they depressed ratings of blameworthiness among first graders but increased them among fifth graders. The grade difference runs opposite to that one would expect based on the children's own intrinsicness and likely reactance against a negative climate; further, it sheds a new and disturbing light on the previously noted (and parallel) interaction found for academic procedure expectations/sanctions.

While these results are relatively trivial in statistical terms, we consider them to be substantively important in pointing to the potentially key — and complex — role of teacher negativity in predicting children's responsibility judgments. Before conducting these analyses for impact of teacher communication, we had concluded that the appropriate teacher structural variable to use in predicting children's responsibility judgments was teacher negativity rather than its alternative correlate managerial efficiency, as used in prior analyses, given that negativity appeared directly tied to notions of responsibility. A teacher's negative communication is, among other things, information about (usually individual) responsibility — for negativity reflects teacher correctives, teacher sanctions, and teacher "oughts" and "ought nots." From this standpoint, greater teacher negativity has a two-sided character: It provides information at the same time that it is affectively aversive. Looked at in terms of children's attention spans, processing capabilities, and the like, one might then expect teacher negativity to have a more positive impact in higher grades as these capabilities increase. Yet on the affective side, if greater intrinsicness of reasoning yields greater reactance to such negativity, one would expect an affective pull in the opposite direction in the more intrinsic higher grade levels. Thus we anticipated that, first, teacher negativity might play an important role in predicting children's responsibility judgments; second, if it indeed had this dual cognitive and

affective impact on responsibility judgments, that results with variables such as grade might be complex ones; and finally, that results for negativity might therefore help to clarify the otherwise anomalous interaction effects found for teacher communication variables.

Because of the greater theoretical relevance of teacher negativity to responsibility judgments, then, regressions for teacher structural variables were run for teacher negativity, teacher openness, and their interactions as predictors of children's judgments of praise and blame. Prior analogous runs for managerial efficiency consisted of series of three-variable hierarchical regressions, first with each variable with grade and social class controls plus their interactions, then for the two variables (openness and managerial efficiency) with grade controlled plus interactions. Because negativity was more highly collinear with openness than was true of managerial efficiency, these runs alone yielded occasional anomalies in results for responsibility judgments. Therefore we also conducted a four-variable regression with grade, social class, negativity, and openness plus interactions, and adopted as a conservative strategy the rule of only considering results as significant when they appeared in <u>both</u> the three- and four-variable analyses. As has been done for prior analyses, regressions were conducted for the eight summary dependent variables of responsibility by domain and by goodness/badness of stimulus. Table 13 presents partial correlations for structural variable effects robust across analyses.

Insert Table 18 about here

Effects of openness on responsibility judgments appear virtually nil. No main effects of openness survive the test of consistency across runs, while

only three interactions survive, all small and all involving bad stimuli. Plots of these interactions revealed that in the social procedure area, openness increased ratings of blameworthiness for working class children. In the social/moral area, openness depressed assigned blameworthiness among first graders but had no effect among fifth graders. Finally, in the academic performance area, openness increased assignment of blame slightly in first grade, more strongly in fifth. Although effects were few and were individually of small size, they form a general pattern in which openness has positive effects on responsibility judgment — if at all — among more intrinsic recipients; for middle class and fifth grade children reason more intrinsically than, respectively, working class and first grade children.

Negativity, in contrast, had a number of robust effects on responsibility judgments. Its sole main effect, on judgments of good stimuli in the social/moral domain, was to depress the rated praiseworthiness of acts; this effect is consistent with what would be expected from the affective role teacher negativity as theoretically seen as playing in the classroom. One pattern of interactions, however, proves both empirically striking and congruent with an information-plus-affect interpretation of negativity's impact. For all eight measures of responsibility, social class and negativity interacted, such that for the middle class children increasing teacher negativity depressed ratings of praise or blame, while for working class children greater teacher negativity enhanced praise/blame ratings. For the relatively more extrinsic children, then, negativity appears to have a positive impact that may reflect its informational quality; for more intrinsic children, it has a negative impact that may reflect its affective meaning.

Results for interactions of grade with negativity, three of which were robust across runs, can be seen as further evidence for a two-sided impact

of negativity on children's responsibility judgments. These three, for the good stimuli in the social procedure domain and the bad stimuli in both academic performance and academic procedure, showed the same patterning among grades by social class. The overall interaction in each case was a tendency for first grade children to show a negative (depressive) effect of teacher negativity on praise/blame assigned and fifth grades to show a positive (enhancing) effect. More detailed examination of this prima facie anomalous result showed that in each case both first and fifth graders in the working class schools showed positive effects, while first graders in middle class schools showed a negative effect and fifth graders no impact. We would interpret this pattern as indicative of two forces at work — the informational aspect of negativity tending to render its impact positive, versus the affective aspect tending to render its impact negative. For the working class schools these two effects then yield a positive impact at both grade levels, although potentially more for affective reasons in the early grade and for informational ones in the later grade. For the middle class children the affective aspect of negativity yields a depressive effect in first grade, while the affective and informational aspects counteract one another among fifth graders to yield an apparent absence of effect. Although this interpretation must certainly be considered speculative at this point, any adequate account of the patterns found must include an explanation of the absence of effect among middle class fifth graders. The presence of two counteractive effects posited here is both consistent with the empirical results and a theoretically plausible account of the meaning of negativity in the context of responsibility judgments.

The sole other robust effect of negativity, as summarized in Table 18, appeared in a three-way interaction with grade and social class for bad stim-

uli in the social procedure domain. Examination of the pattern showed that in the middle class schools the effect of negativity moved in a positive direction between first and fifth grade, while in the working class schools it moved in a negative direction. This pattern can also be seen as a further indication that opposing forces — counteracting impacts of negativity on judgments — are at work in producing the overall patterns of responsibility judgments. From that viewpoint, the countervailing impact of information (positive direction) shows most clearly where intrinsicness was originally high; the impact of affective reaction (negative direction) shows most clearly where intrinsicness was originally low.

Results for particular aspects of teacher communication and for general features of classroom structure thus present an overall pattern of results that are internally consistent and informative regarding the meaning of teacher negativity in the context of responsibility judgments. Although effects of all such variables were small, their consistency — and especially the eight repetitions of a social class-negativity interaction — make them noteworthy. As in earlier analyses, the meaning of teacher stimuli proved to be conditioned by the development of the child receiving those stimuli. In contrast to earlier results, however, the patterns found for teacher negativity suggest that it plays two contradictory roles in guiding children's responsibility decisions: facilitating such judgments by providing information, an effect understandable in terms of a social learning model; and depressing the intensity of such judgments through provoking an affective reaction that takes on greater intensity as the child's own intrinsic reasoning develops. The otherwise anomalous results found earlier for teacher expectations and sanctioning can then be understood in terms of the negativity that characterizes such communications, and the general patterns both for these variables and

for negativity itself can be seen as a trade-off between negativity's informational and affective aspects. Thus the most important conclusions regarding effects of teacher communication and classroom structure appear to be that teacher negativity indeed plays an important role in children's responsibility judgments, but that this variable's two-fold meaning makes its impact an ambiguous one.

The impact of teachers' own judgments on children's ratings. Although relationships between various elements of teacher communication or classroom structure and children's responses can provide hints at whether and how teachers affect children's judgments of responsibility, they do not directly tell us that the teacher's own views have an impact on those of the child. With regard to the responsibility questionnaire, we have an opportunity to obtain a direct test of whether this is so, given that teachers themselves also filled out these questionnaires. For the 16 teachers who returned them, then, we can analyze whether there is a correlation between the teacher's response and those of the children, and can incorporate it in a model that also assesses possible differences by grade level.

Eight hierarchical regressions were therefore run, again separating good and bad stimuli for each of the four domains, and including in the regression the variables of grade, teacher score, and their interaction in hierarchical order. Four main effects emerged, one for each set of bad stimuli. In all cases the teacher's score was positively correlated with her children's ratings. One interactive effect emerged in the good stimuli for academic performance; it proved to result from a negligible negative relationship in first grade, but a substantial positive one in fifth, between teacher's and children's scores.

Such results are of course correlational, and do not prove that the teacher's rating in any sense causes those of the children; further, the

results do not even prove that there is any specific linkage between a teacher and her pupils. One could easily argue, for example, that results simply show that adults and children judge bad things similarly. One plausible comparison which is readily available, however, can shed light on these possibilities. If indeed the association is simply a general one between adults and children, then a random match between teachers and children should yield results similar to those already obtained. If a random match proves different, it indicates that the association between teachers and their pupils is a result of their pairing in the classroom; and, given the discrepancy in their respective roles and experiences, at least suggests that children are learning their responses from the teacher rather than the reverse.

A random-match parallel to the previous models was therefore constructed by first randomly associating children from given classrooms with teachers available for assignment. Then children's responses were regressed on grade, their randomly matched teacher, and the interaction between the two. Results proved dramatically different from those already reported for actual teachers. Only three main effects reached significance, and in all three cases (two bad sets of stimuli, one good) the randomly matched teacher's score was significantly negatively correlated with the children's. It is thus apparent that children's answers are associated with those of their teacher as an individual — and not simply as an adult — and at least plausible that teachers are producing this similarity through their communication in the classroom.

The congruence between these results and earlier ones concerning the nature of communication further heightens the possibility that teachers are literally teaching views of responsibility. The specificity of the effects themselves is suggestive, in that all main effects concerned bad stimuli and that this was true for all domains. Recalling the overwhelming negativity

to it, and just how they adhere to it, can be highly informative about what the socialization process may mean for any of the specific classroom acts being thereby encouraged or discouraged.

It is already established that the adult's allocation of punishment, at minimum, can be modeled to an almost perfect degree with a simple linear function such that the more serious the offense, the more severe the punishment deemed appropriate — i.e., justice as desert (Hamilton and Rytina, 1980). Thus two questions that emerge for data on children concern, first, whether children exhibit such a justice structure and, second, whether it holds across good deeds as well as misdeeds. Further, the Hamilton and Rytina paper also raised a theoretical issue about the cognitive structure of norms, in the course of testing normative consensus on whether the "punishment should fit the crime." The authors identified two meanings of normative consensus that are usually confounded: consensus on evaluation of the stimuli in question, versus consensus on use of the principle involved. Thus with respect to crimes and punishments, it is one thing to agree with one's fellows in evaluating, say, assault for its seriousness or five years in prison for its degree of severity; it is another thing to agree with the principle that the punishment should fit the crime. These components of consensual evaluation versus consensual principle application can be pulled apart given the appropriate data. We will briefly outline the type of data and the modeling strategy needed in the context of the children's data from the present project.

To assess whether a norm of justice — in this case the general model that reward/punishment be deserved — is operating, one needs data about the inputs, the outcomes, and their match. For the inputs, the deeds, we have ratings of their importance from the importance/feelings questionnaire; "good versions" (e.g., comforting another child, not fighting) can simply be as-

of teacher communication, it appears likely that what teachers are communicating most thoroughly about responsibility concerns negative outcomes. Certainly their volume of communication is consistent with this pattern of apparent causal impact.

Children's Models of Classroom Justice: Norms as Rules and Norms as Rote

Thus far we have explored several facets of children's learning the norms of classroom life. First, we have directly examined teachers' communication that is geared to socializing the student role. Second, we have explored children's judgments regarding several facets of the norms that make up that role: judgments of importance of norms, reasoning about why the norms are important, affect about meeting or failing to meet normative expectations, and assessment of the degree of praise or blame deserved by others who conform or fail to conform to normative expectations. Third, we have repeatedly explored the impact of children's own demographic characteristics and teacher communication or classroom structural variables on children's thinking about the student role. What we have not yet faced is the question of just what it means cognitively for a child — a first grader or fifth grader — to hold a norm about classroom life, or in what ways a child's normative thinking might differ from that of an adult. Thanks to the juxtaposition of data from the first year of the study in which we asked about importance of norms, in one questionnaire, and rewards and punishments for conformity/nonconformity in its follow-up, we are able to give a preliminary model of the cognitive structure of a norm that may be central to the socialization process: the norm that rewards and punishments be meted out in accordance with desert. Such a justice norm encompasses, orders, and makes consistent children's reactions to the full range of classroom good deeds, misbehaviors, rewards, and punishments. Thus the questions of whether children consistently adhere

signed their original numerical values and "bad versions" (e.g., not comforting another, fighting) their original values with a minus sign. For the outcomes, the teacher rewards/punishments, we also have ratings from the same questionnaires which can be treated in parallel fashion. The matching operation utilizes the responsibility questionnaire, in which children made reward/punishment assignments among their other decisions in assessing the experimentally varied stimuli. Assignment of the same importance ratings to the varied versions represents a relatively conservative strategy, as experimentally created differences would tend to dampen apparent adherence to a justice norm. (For example, importance assigned to a good versus extra good experimental version would be the same, based on the initial questionnaire; thus any differences in reward assigned to them would appear as noise for the purposes of the present modeling.)

Children could appear to be upholding a desert-based model of justice according to two quite different underlying processes, which can be separated by an appropriate analysis strategy. A first model we can call <u>consensus based on rote learning</u>; a second, <u>consensus based on rule application</u>. Hamilton and Rytina (1980) provide an extended account of rote versus rule processes with respect to crime and punishment:

> . . . justice norms as cognitive entities should involve the individual in the use of a principle or rule that orders perceptions and determines valuations. An alternative version of what norms mean involves the simple rote learning of the "way things are" in a given social world. Under this model, an individual's apparent use of a principle like just deserts could represent nothing more than rote learning of the socially understood seriousness and punishments for various crimes — perhaps through a process of repeated association on TV, in the newspapers, and so forth. Under such a model, group averages reflect the outcome of this learning process, and individual judgments are imperfect reflections of these aggregate social facts. The extent to which individual responses display an apparent pattern would not reflect personal adherence to a principle of just deserts; instead, individual-level correlations would be a joint result of the extent to which group averages display a monotonic fit and the degree of the individual's success in reproducing the group averages. (p. 1135)

This distinction between rote and rule versions of a norm of justice rests on the possibility of separating out consensus on social stimuli from consensus on a rule for ordering those stimuli.

Tests for the forms of consensus and subsequently for rote versus rule norm application involve three steps in assessing children's justice data. A first step is to test for apparent adherence to a justice rule at the individual level. This involves the within-individual correlation between input values (importance ratings for good/bad stimuli) and outcome values (extremity ratings for the rewards/punishments matched to the stimuli by the individual child). This step provides some indication of normative dissensus in the sense of not fitting the input to the outcome in, at minimum, a monotonic fashion — i.e., dissent from the justice principle. A second step involves calculating group averages for all stimuli and outcomes and assessing individuals' degree of correlation with group judgments. This step provides an indication of normative dissensus in the sense of disagreement on concrete stimuli. For both types of measure, demographic correlates of dissensus can be assessed.

The final step — the testing for rote versus rule versions of principle adherence — incorporates the information from the first two. Figure 1, model a, illustrates a model for the rote-learning version of justice as desert. Following the logic of the earlier study, in a rote learning version of norms individual evaluations of inputs and outcomes are each reflections of aggregate evaluations; therefore the individual-level fit of inputs to outcomes can be found by multiplication around the model, as it would be the product of indivual's fit of input evaluations to aggregate evaluations, the aggregate fit of inputs to outcomes, and the individual's fit of outcome evaluations to aggregate evaluations. The "rote" element of this model can be identified by considering the arrows representing the correlation of errors (deviations u and v) — i.e., the correlation of individual deviations from

aggregate input and outcome assessments. If deviations are uncorrelated, it indicates that apparent use of the justice principle at the individual level can be accounted for by agreement with group assessments. Degree of positive correlation of the deviations, in contrast, indexes the extent to which individuals use a principle in ordering judgments: showing that if they deviate from the group on input evaluations, they then correspondingly deviate in assigning reward and punishment. (As Hamilton and Rytina note, this is actually a conservative test for the presence of a cognitive principle, since rule-applying children who happen to agree with the group would not show correlated errors. But fit attributable to consensual forces could reflect either rote or rule learning, while correlated deviations unambiguously reflect applying the principle.) Because model a is not always appropriate due to identification restrictions, we here estimate model b from Figure 1, paralleling the prior Hamilton-Rytina analysis; this just identified model serves equally well for testing the alternative normative models through examining correlation of the deviations.

Insert Figure 1 about here

Results. In the earlier research with adults, it was possible to test alternative functional forms for the justice equation given that the data were obtained by a psychophysical scaling procedure and therefore theoretically ratio in nature (see Hamilton and Rytina, 1980). Results indicated that a proportional model of justice as desert, suggested by equity theorists such as Adams (1965), was not supported by the data and that instead a simple monotonic matching, as favored by other researchers such as Harris (1976),

adequately described those adult data. Thus the present parallel analyses for children's classroom justice simply utilized linear regressions within child, with the child's reward/punishment score to be regressed on the goodness/badness evaluation of the stimulus act. The within-individual r then indexes the extent of monotonic match between deed and sanction.

For the 318 children on whom data from both questionnaires was available, the degree of apparent adherence to a justice principle was high. The overall within-individual correlation between inputs and outcomes averaged .71, with the median r an even more substantial .76. Thus one version of normative consensus, that concerning use of the justice principle involved, would appear to be quite substantial; the adult data regarding crime and punishment, for example, showed a within-individual r of .67 for abstractly defined crimes and .79 for concrete examples. It should be recalled, however, that this within-individual correlation can be a function of simple rote processes and needs to be examined in light of consensus of the other sort, that with the group average in evaluating social objects.

Consensus with the group proves to be quite high in the classroom data. The average correlation of individual assessments of inputs with the group mean for those inputs was .94, and the median an even higher .96; the average correlation of individual output evaluations with the group mean for outputs was a somewhat lower .75, with a median of .81. The totally aggregated model, predicting average sanctions from average input evaluations, showed an r of .98 between the two. These data largely parallel those found for adults regarding negative acts, where the average aggregate r was .98 or .97 (for abstract or concrete crimes), but where consensus between individuals and group averages was somewhat lower (.71 and .77 for abstract and concrete inputs, .73 and .75 for abstract and concrete outcomes). Adult and child data

differ in a variety of ways such that formal comparisons are inappropriate here, but the adult data are included for general information purposes in part because the size of relationships is so unusually large. Both adults and children tend to agree highly with their fellows about the objects of justice assessments, and both adults and children to a high degree match up those objects consistently with a model of justice as desert. Acts seen as good are rewarded; those seen as evil, punished. And the matchings are done with what is, in the aggregate, an almost uncannily perfect fit.

It is not yet clear, however, that children's justice as desert is meted out by rule rather than by rote. Estimations of the model in Figure 1 (b) were therefore made for all children. (Note that since the issue is one of within-individual association, the data provide 318 separate estimations of the model, or in a sense replications of the test for correlated errors.) The partial correlation within individual of inputs with outcomes, having controlled for the correlation of each individual's scores with the group averages and for the association of the group averages with one another, is the indicator of whether deviations are themselves principled. The children's data show no evidence of use of a justice principle over and above agreeing with group assessments — i.e., rote learning. The mean partial r is .05, the median .04, and overall 60% show partials greater than zero and 40% zero or less. To indicate how this might instead appear, the adult data are again instructive, showing median partials of .40 and .62 (for abstract and concrete crimes); and virtually all adults showed positive partials, 82% for abstract offenses and 93% for concrete ones. Thus children, in assessing classroom goods and bads, exhibited an adherence to justice as deservingness that overall strongly resembled that shown by adults in evaluating crime; but they did so by a distinctly different cognitive route. Strong adherence to a norm

of justice can be arrived at by rule application, or by rote learning. Within the age ranges of this study, at least, the child's vision of classroom justice is clearly the justice of rote rather than the justice of rule.

Demographic determinants. In exploring the meaning of children's justice-by-rote, demographic characteristics held some promise of clarifying this model. In particular, grade level seemed likely to related to some or all components of the model, and fifth graders likely to show some evidence of principle application as a function of cognitive development. Possible effects of sex and social class were less clear. The earlier study with adults had found evidence of less use of a just desert model (for either rote or rule reasons) by lower income and black respondents, as well as less evidence of principled deviation (correlated errors) among females (Hamilton and Rytina, 1980); but the predictive power of such results for still-developing working class children or girls was uncertain.

With respect to clearcut use of a justice principle, as evidenced by correlated deviations in the model of Figure 1, no demographic differences whatever emerged. The lack of relationship is of course most surprising for grade level; its absence can perhaps best be taken as evidence that, despite gains over first graders on such variables as intrinsicness of reasoning or consistency between ratings of importance and affect, as noted earlier, fifth graders are simply not formal operational and hence not consistently utilizing a cognitive principle to order their justice assessments.

Larger surprises emerged, however, in considering the other components of the model. Correlations for each component, summarized in Table 19, reveal no relationships of consensus with social class, save one weak tendency for working class children to show less overall linkage of inputs to outcomes according to desert, a result consistent with the prior study of adults; this

overall linkage, however, can be a function of either rote or rule processes. Sex differences show females to be significantly more in agreement with group averages in evaluating both inputs and outcomes, and additionally showing a stronger overall within-individual correlation between the two. Given the other results, this last finding of more use of just deserts-based matching by girls can probably be attributed to rote learning processes; for the girls agree more with the group consensus concerning both inputs and associated outcomes, and the group average match between the two was a near-perfect .98. These results are consistent with general evidence of greater normative conformity by girls found elsewhere in these data. The results for grade differences, in contrast to those for social class or sex, form the true surprise. Parallel with the results for sex differences, fifth graders emerge as significantly lower in overall within-individual justice correlation, lower in agreement with group averages regarding inputs, and lower in agreement regarding outcomes. It is possible to argue that these differences, like those for sex, are a result of rote forces and hence can be discounted; according to this interpretation, the grade differences would thus reflect greater normative conformity on the part of first graders, a pattern also found elsewhere in the data. But we felt that it would be facile to do so without a further probe of the grade effects, especially in light of the a priori expectations of signs of further cognitive development on the part of fifth graders. This further probe, described below, indeed proved to reveal subtle evidences of development as well as exposing a major way in which the children's justice judgments contrast with those of adults.

Insert Table 19 about here

A pared-down dataset of 299 children was prepared, including those cases with both input and outcome data for 140 out of the 144 possible values (72 stimuli times input/outcome). While average values for this dataset differed only trivially from those for the overall data (and hence the results reported earlier did not need revision), it was possible to eliminate certain alternative hypotheses by using it — such as, for example, the hypothesis that grade differences were a function of differentially bad data or incomplete responses. A variety of different statistics were examined in this smaller data set, including examination of judgments for domain differences or for differences between good and bad stimuli, examinations of variances as well as means, and the like. Domain differences proved unimportant; but the distinction between good and bad stimuli revealed a key pattern in the data, and consideration of variances as well as means provided a clue to explaining the grade differences.

A look at the justice data divided into their good and bad stimulus halves showed a striking result: Within the halves, there was no within-individual correlation between input and outcome values. Within good stimuli, the association averaged .05; within bad stimuli, .09. Within each stimulus type, the correlation between input and outcome was significantly higher for fifth graders than for first, however. For good stimuli, the average first grade correlation was .02, while that of fifth graders was .07; for bad stimuli, the first graders averaged .04, in contrast to the fifth graders' .13. These stand in contrast to average correlations across good and bad stimuli of .79 for first graders versus .66 for fifth graders. On a more detailed look, then, children's justice judgments are highly ordered — but ordered only with respect to the single broad principle of good versus bad. In parallel with the results for responsibility judgments, those for justice show a single

distinction to be salient, with little differentiation beyond. While it may be highly ordered overall, the child's world of classroom acts is a categorical one of goods versus evils, and the child's classroom justice is categorical justice.

The input-outcome judgments of fifth graders, then, are more strongly associated within these two worlds of goods and evils, one sought-for piece of evidence for their advanced cognitive development. A second evidence of difference then emerges in considering the variability of responses. In attempting to account for the reverse relations of grade to the overall and good/bad half data, we examined the standard deviations of input and outcome evaluations overall and by halves. The overall standard deviations were both highly correlated with grade — -.48 for inputs and -.52 for outcomes — and strongly related to overall justice matching — correlated .34 in the case of inputs and .51 in the case of outcomes. Input-outcome matching according to a justice function within halves, in contrast, was negatively correlated with overall standard deviations.

One way to make sense of such patterns in light of choices made by the children is to argue that they reflect increased discriminative abilities on the part of fifth graders. The first graders are using the extreme ratings, bipolarizing their evaluations, to a greater extent than their fifth grade counterparts. This bipolarization yields large overall standard deviations. Yet by not bipolarizing, fifth graders actually show higher degrees of discrimination in evaluating inputs within halves, as indexed by larger standard deviations for them there. In evaluating outcomes, a different discrimination appears to be at work, in that fifth graders show less variability by halves as well as overall; this pattern seems most compatible with fifth graders' having learned that certain rewards/punishments are typical, and utilizing

a more limited set in accord with that knowledge. Finer discriminations with regard to inputs and judicious choices of appropriate outcome then yield them greater justice structure within half even as they evidence less structure overall. Empirically at least, the grade difference in assigning punishments proved to be crucial, for the anomalous grade difference in overall justice matching was eliminated when the standard deviation of outcomes was controlled. But the differences in both input and outcome evaluations are of theoretical relevance for understanding developing justice frameworks.

Overall, then, this exploration of grade differences revealed one overarching dichotomy in the children's judgments and, within this dichotomy, evidences of greater sophistication on the part of fifth graders. The powerful overall fit between inputs and outcomes was found to result from a dichotomization into good versus bad stimuli, with minimal justice structuring within stimulus types and maximal separation between the two. This categorical justice universe was more so for the younger children, who tended to extreme judgments and actually provided poorer matches of input to outcome within halves than did fifth graders. In addition to spreading their evaluations of input acts more finely, fifth graders also proved to choose among a more restricted set of rewards and punishments, perhaps as a function of knowledge gained about actually likely outcomes. With variability in outcomes controlled, the two grade levels were indistinguishable in their overall justice function.

Children's justice judgments in these data, then, lead to three general conclusions. First, the justice meted out is a justice of rote rather than rule for the most part, showing none of the evidences found in adult data for structured cognitive deviations. Second, the overall matching that appears so similar to adults' in numerical value if not in underlying process proves to result from a dichotomized universe of goods versus bads rather

than any fine discriminations within these categories. Third, demographic comparisons yield evidence of lower conformity among working class children, greater conformity on the part of girls, and certain tendencies away from polarization on the part of fifth graders — short of principled dissent, but perhaps a step toward initial formation of a justice principle.

Overview and Further Research Plans

A conclusion belongs at the end, and several components of a full report on this project remain to be completed, as we indicated earlier. Therefore in the present report we will simply outline the data analysis steps taken and provide provisional summaries of broad patterns, with the expectation of providing definitive conclusions in the addendum. Data of several types have been analyzed and interrelated: teacher communication about the content of the student role, student perceptions of that role, the impact of structural variables like openness of classroom on both teacher talk and student thought, the impact of children's demographic characterics on both, and the interrelationships between teacher talk and student thought. Analyses of children's responsibility judgments and their justice models, in particular, are still in preliminary stages, however.

It is nevertheless possible to suggest three broad patterns emerging from these data. First, teacher communication itself and its impact on student judgments generally fit the description we initially outlined in Blumenfeld et al. (forthcoming; Appendix G): Teachers play a managerial role, their behavior largely serves those functions, and students respond for better or worse in ways reminiscent of workers, rather than learners. Effective managers, for example, yield more involved workers in the classroom as elsewhere. Second, of the demographic differences among children grade level stands out as having dominant impact on student thought, as anticipated. Third, teacher communication has a differential impact depending upon the audience; the meaning of teacher messages is not always clear without knowing the recipient. Statistically, the last pattern is reflected in numerous interactions between variables like teacher managerial efficiency or teacher

negativity and children's characteristics like age or social class.

In addition to further explorations of responsibility and justice judgments, follow-up analyses will focus on two data types not covered in the present report. First, children's perceptions of their own classroom's characteristics and their own achievement within it will be related to the previously obtained data. Second, children's behavior will be linked with their perceptions of the student role for a subset of the children. Each of these additional data sets is seen as a key element in the larger puzzle of how teachers communicate and students absorb the student role; for the role has components of specific classroom knowledge and judgments as well as abstract views of behavioral norms--and the role ultimately <u>is</u> actions, not merely thoughts about those actions.

Footnotes

[1]Of the possible aspects of action, we then focus on attributions about the causes of action. An extensive recent literature in social psychology attests to the potential relevance and fruitfulness of this focus.

[2]Class composition of the schools was determined by conversations with principals about the class backgrounds of students as well as by the general industrial characteristics of the communities concerned.

[3]The teacher is referred to as "her" ("she") throughout for convenience, as all but one of the teachers involved are female.

[4]Thanks are extended to our computer and statistical consultant, John Gray, for suggesting this transformation as the most appropriate for these data.

[5]Domain categories used in the teacher codes were modified for children observations. Academic performance and procedure (academic) were combined as were social procedure and social/moral (social/procedural). A new domain, personal was added. The domains were combined so as to typify areas of interaction in contrast to specific remarks concerning norms more relevant in the teacher codes.

[6]An overall chi-square test for domain differences in kind of information (with subcategories collapsed) did show highly significant differences with dramatic reliance on attributions in academic performance, and expectations and sanctions dominating the other domains, as would be expected from examining the more finely differentiated table.

[7]Very small amounts of communication were addressed to small groups made up entirely of girls or boys. Because these mirrored the results for boys and girls individually, they were combined with those for individuals in these analyses.

[8]By ambiguous norms we mean ones in which the socialization might readily be phrased in terms of either commission or omission (e.g., "don't be late" vs. "be on time"; "be neat" vs. "don't be messy").

[9]It appears more plausible that the domain or topic determines the affective tone than the reverse. Thus, given their high intercorrelation, we chose to use the more structural (and probably causal) variable to the two.

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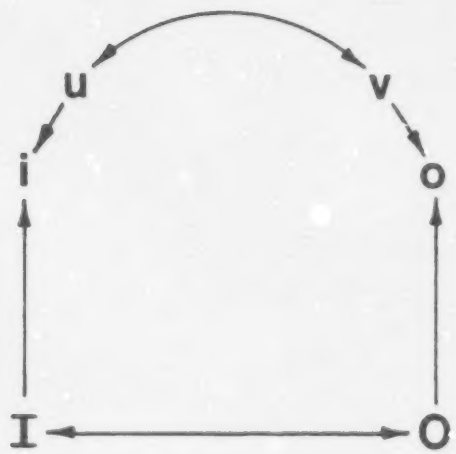
Fig. 1. Models of the determination of an individual's input evaluation-outcome evaluations by sample average ratings, where I=the sample average input ratings, O=the sample average outcome ratings, i=the individual's input ratings, o=the individual's outcome ratings, and u and v are the deviations.

FIGURE I

Model a



Model b

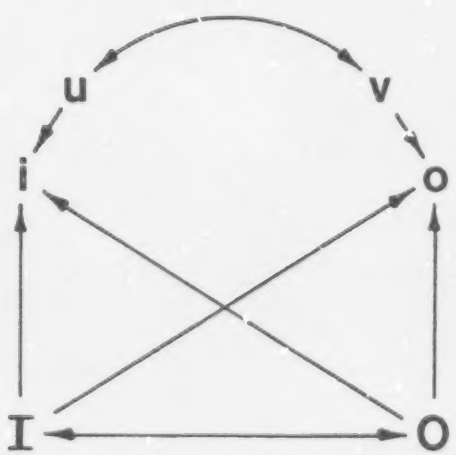


TABLE 1. SUMMARY OF DATA SOURCES

SOURCE	DESCRIPTION	N YEAR 1	N YEAR 2	INDEPENDENT/ DEPENDENT VARIABLE
1) Demographic data on children	Children's age, sex, SES and achievement level based on information in school and teacher records.	360 children	158 children	Independent
2) Ethnographic data	Extensive ethnographic field notes based on teacher and student activities in the room; see Bossert (1979) for details.	12 classes	11 classes	Independent
3) Teacher codes	Structured observation based on all teacher verbal communication to the whole class, small group or individual children, over 10 hours in math or reading lessons, similar to Brophy-Good (1974) system.	16 teachers	11 teachers	Independent/ Dependent
4) Child rating of norms/ responsibility	Children's ratings of classroom norms across various domains (academic outcome, academic procedures, social procedures and social-moral) as to relative "morality" for commission or omission. Also included was affective response and reasoning behind judgments. See Blumenfeld et al. (Appendix A) for details. Follow-up quesionnaires assessed judgments of responsibility and rewards or punishments for hypothetical variations in these x norms.	360 children	----	Dependent

SOURCE	DESCRIPTION	N YEAR 1	N YEAR 2	INDEPENDENT/ DEPENDENT VARIABLE
5) Child codes	Structured observation based on individual child's interaction with teachers and peers with respect to social and academic feedback, similar to Brophy and Good's (1974) system.	40 children	88 children	Independent/ Dependent
6) Child interview	Structured interview with sealed (1-5) questions and open-ended questions on children's perceptions of ability, effort, conduct, peers, teacher, classroom, etc. Interview done in three sessions at end of second year. Each session lasted approximately 30 minutes.	----	158 children	Dependent
7) Teacher ratings of children	Teacher rated students' academic performance in math and reading as well as a variety of personal traits (e.g., aggressive, mature) and behavioral characteristics (well-behaved, easy to work with); administered at end of second year. Teacher rated all children who were interviewed.	----	158 children	Independent/ Dependent

SOURCE	DESCRIPTION	N YEAR 1	YEAR 2	INDEPENDENT/ DEPENDENT VARIABLE
8) Observer ratings of classroom/ teacher	Observers rated different characteristics of classroom such as teacher management, accountability system, "climate" of class, grouping patterns, etc. Administered at end of year after observers had been in classroom for approxiately 30 hours.	----	11 classes/ teachers	Independent
9) Observer ratings of children	Observers rated different aspects of children using same instrument as teacher. Only the 88 children the observers followed for 2½ hours were rated.	----	88 children	Independent

Table 2

Characteristics of overall teacher communication

Versus Informatives

	Overall	Informative
Reactivity		
Before	22%	21%
After	78	79
Evaluative tone[a]		
Positive	28%	8%
Negative	49	71
Distribution		
Academic Outcome	41%	20%
Academic Procedure	31	37
Social Procedure	26	40
Social/Moral	2	3
N (clauses)	10,526	1416

[a]Ambiguous or not applicable (before) communication not presented.

Table 3

Domain differences in reactivity and quality

of overall communication and informatives

	Academic Performance	Academic Procedure	Social Procedure	Social/ Moral
Overall Communication				
Percent Informatives[a]	10%	21%	24%	31%
Reactivity[b]				
Before	2%	47%	22%	15%
After	98	53	78	85
Evaluative tone[c]				
Positive	64%	4%	3%	6%
Negative	30	49	76	81
N(clauses)	4300	3299	2755	167
Informatives				
Reactivity[d]				
Before	8%	34%	16%	21%
After	92	66	84	79
Evaluative tone[e]				
Positive	29%	4%	2%	2%
Negative	62	63	82	81
N(clauses)	276	525	568	47

[a] χ^2 from table including informatives, feedback, and instruction = 1607, d.f. = 6, $p < .0001$.

[b] $\chi^2 = 2251$, d.f. = 3, $p < .0001$.

[c] Ambiguous or not applicable (before) communication not presented. Overall $\chi^2 = 6130$, d.f. = 9, $p < .0001$.

[d] $\chi^2 = 90$, d.f. = 3, $p < .0001$.

[e] Ambiguous or not applicable (before) communication not presented. Overall, $\chi^2 = 271$, d.f. = 9, $p < .0001$.

Table 4

Distribution of expectations, attributions, and sanctions in teacher talk overall and by domain[a]

Information:	Overall	Academic Performance	Academic Procedure	Social Procedure	Social Moral
Expectations					
Rule	6	2	3	7	30
Consequences to self	12	6	17	11	4
Consequences to group	2	0	2	3	0
Consequences to other	7	2	3	13	21
Consequences to teacher	4	2	2	6	0
Consequences to object	2	0	1	4	0
Circumstances	10	2	13	10	6
Authority	2	1	2	3	4
Attributions					
Positive effort	4%	14%	3%	1%	2%
Negative effort	7	21	7	1	0
Positive ability	3	9	3	1	0
Negative ability	3	4	3	2	2
Unstable	1	2	2	0	0
Task	5	11	6	0	0
Mixed	4	13	2	1	0
Sanctions					
Reward	1	1	2	1	0
Promise	0	0	1	0	0
Punishment	6	7	3	9	11
Threat	15	3	16	20	13
Redirection	7	0	11	7	6
N (clauses)	1414	275	524	568	47

[a] χ^2 for domain differences = 685, d.f. = 57, $p < .0001$.

Table 5

Characteristics of overall communication to boys, girls, and groups of students

	Boys	Girls	Small Group	Whole Class
Reactivity[a]				
Before	11%	10%	51%	46%
After	89	90	49	54
Quality of Feedback[b]				
Positive	33%	41%	15%	6%
Negative	54	45	34	49
Distribution[c]				
Academic Performance	49%	61%	17%	7%
Academic Procedure	27	23	48	44
Social Procedure	22	15	35	47
Social/Moral	2	2	1	2

[a] $\chi^2 = 1851$, d.f. = 3, $p < .0001$.

[b] Ambiguous or not applicable (before) communication not presented. Overall $\chi^2 = 2247$, d.f. = 9, $p < .0001$.

[c] $\chi^2 = 1863$, d.f. = 9, $p < .0001$.

Table 6

Student thought about classroom norms by domain:

Importance (lines) and feelings (faces) for each norm

A. Academic Performance

Issue	Importance				Feelings			
	Overall	First Grade	Fifth Grade	Significance level	Overall	First Grade	Fifth Grade	Significance level
OVERALL	.66	.74	.59	d	3.23	3.45	3.01	d
Math Content	.74	.80	.70	c	3.50	3.58	3.42	a
Language Content	.70	.75	.65	c	3.30	3.47	3.14	d
Other Content	.63	.70	.57	d	3.26	3.47	3.08	d
Language Format	.57	.68	.47	d	2.90	3.27	2.57	d
Math Format	.66	.76	.58	d	3.11	3.44	2.81	d
OVERALL	.46	.57	.37	d	2.74	3.12	2.39	d
Math Content	.54	.61	.48	d	3.07	3.27	2.90	c
Language Content	.55	.62	.49	c	2.92	3.14	2.72	d
Other Content	.40	.52	.29	d	2.64	3.12	2.21	d
Language Format	.34	.48	.21	d	2.29	2.80	1.82	d
Math Format	.52	.64	.40	d	2.76	3.25	2.31	d

a) t - test $p \leq .05$
b) $p \leq .01$
c) $p \leq .001$
d) $p \leq .0001$

Table 6 (cont.)

B. Academic Procedure

Issue	Importance				Feelings			
	Overall	First Grade	Fifth Grade	Significance level	Overall	First Grade	Fifth Grade	Significance level
OVERALL	.68	.76	.60	d	3.05	3.43	2.79	d
On-Task	.68	.78	.59	d	3.06	3.47	2.69	d
Assistance	.65	.76	.55	d	3.01	3.38	2.68	d
Persistence	.75	.82	.68	d	3.78	3.48	2.92	d
Readiness	.64	.69	.59	b	3.07	3.42	2.76	d
Routine	.65	.75	.56	d	2.96	3.37	2.58	d
Completion	.70	.76	.64	c	3.27	3.47	3.08	d
OVERALL	.59	.68	.51	d	2.91	3.23	2.63	d
On-Task	.64	.75	.53	d	2.99	3.36	2.66	d
Assistance	.57	.67	.47	d	2.85	3.23	2.49	d
Persistence	.68	.76	.61	d	3.07	3.31	2.85	d
Readiness	.51	.56	.47	b	2.72	2.91	2.55	c
Routine	.62	.71	.53	d	2.99	3.36	2.63	d
Completion	.53	.63	.44	d	2.87	3.22	2.55	d

a) t - test $p \leq .05$
b) $p \leq .01$
c) $p \leq .001$
d) $p \leq .0001$

Table 6 (con't)

C. Social Procedure

Issue	Importance				Feelings			
	Overall	First Grade	Fifth Grade	Significance level	Overall	First Grade	Fifth Grade	Significance level
OVERALL	.62	.73	.53	d	2.93	3.36	2.55	d
Materials	.69	.78	.60	d	3.12	3.50	2.78	d
Place	.55	.68	.44	d	2.79	3.27	2.35	d
Lining Up	.57	.69	.45	d	2.82	3.30	2.39	d
General	.59	.68	.50	d	2.81	3.25	2.41	d
Turn Taking	.64	.73	.55	d	2.97	3.34	2.63	d
Role	.64	.71	.57	d	3.00	3.42	2.63	d
Late	.63	.73	.54	d	2.93	3.38	2.53	d
Cleaning Up	.70	.81	.60	d	3.06	3.47	2.71	d
Noise	.62	.72	.53	d	2.89	3.32	2.50	d
OVERALL	.58	.69	.47	d	2.82	3.21	2.47	d
Materials	.64	.77	.52	d	3.03	3.44	2.65	d
Place	.43	.57	.31	d	2.42	2.88	2.00	d
Lining Up	.56	.70	.44	d	2.74	3.26	2.25	d
General	.67	.77	.58	d	2.99	3.35	2.66	d
Turn Taking	.61	.71	.51	d	2.89	3.26	2.56	d
Role	.63	.71	.56	d	3.04	3.25	2.85	d
Late	.39	.48	.31	d	2.44	2.80	2.11	d
Cleaning Up	.66	.79	.53	d	3.03	3.40	2.69	d
Noise	.60	.75	.48	d	2.84	3.25	2.47	d

a) t -test $p \leq .05$
b) $p \leq .01$
c) $p \leq .001$
d) $p \leq .0001$

Table 6 (cont.)

D. Social/Moral

	Issue	Importance			Significance level	Feelings			Significance level
		Overall	First Grade	Fifth Grade		Overall	First Grade	Fifth Grade	
GOOD BOOKS	OVERALL	.73	.81	.66	d	3.21	3.50	2.95	d
	Comforting	.78	.84	.72	d	3.33	3.55	3.14	d
	Aggression	.70	.83	.59	d	3.13	3.45	2.84	d
	Lying	.77	.83	.71	d	3.18	3.51	2.87	d
	Sharing	.70	.76	.65	c	3.21	3.45	3.00	d
	Include Others	.68	.77	.60	d	3.19	3.56	2.84	d
	Playing Fair	.65	.75	.57	d	3.09	3.47	2.74	d
	Cheating	.76	.82	.70	c	3.24	3.52	2.99	d
	Stealing	.79	.83	.75	b	3.33	3.50	3.18	c
BAD BOOKS	OVERALL	.69	.76	.63	d	3.14	3.40	2.91	d
	Comforting	.65	.74	.56	d	3.12	3.47	2.80	d
	Aggression	.78	.86	.71	d	3.30	3.57	3.05	d
	Lying	.84	.89	.80	c	3.55	3.68	3.42	c
	Sharing	.57	.69	.46	d	2.91	3.39	2.47	d
	Include Others	.63	.73	.54	d	2.96	3.24	2.72	d
	Playing Fair	.54	.60	.49	b	2.84	3.10	2.60	d
	Cheating	.83	.84	.82	n.s.	3.45	3.51	3.41	n.s
	Stealing	.89	.89	.90	n.s.	3.66	3.68	3.64	n.s.
	Tattling	.55	.64	.46	d	2.72	3.03	2.44	d
	Teasing	.63	.74	.53	d	2.93	3.32	2.56	d

a) t - test p
b) $p \leq .01$
c) $p \leq .001$
d) $p \leq .0001$

Table 7

Partial correlations for significant sex differences in feelings ratings.

	Domain and Issue	Partial r's	Significance Level
Bad Books	Academic Procedure		
	Overall	.14	.01
	On Task	.16	.002
	Routine	.11	.04
Bad Books	Social Procedure		
	Overall	.15	.005
	Lining Up	.14	.009
	General Social Procedure	.12	.03
	Late	.14	.01
	Cleaning Up	.12	.03
	Noise	.15	.007
Bad Books	Social/Moral		
	Overall	.21	.0001
	Comforting	.14	.01
	Aggression	.15	.007
	Lying	.16	.004
	Sharing	.15	.005
	Tattling	.12	.03
	Teasing	.14	.008

Table 8

Partial correlations for significant social class differences in importance or feelings ratings

		Importance		Feelings	
	Domain and Issue	Partial r	Significance	Partial r	Significance
Good Books	Academic Performance				
	Overall	.12	.02		
	Language Content	.12	.03		
	Other Content	.18	.0006		
Bad Books	Academic Performance				
	Overall	.20	.0003	.20	.0002
	Other Content	.24	<.0001	.20	.0002
	Language Format	.11	.05	.15	.007
	Math Format	.14	.01	.19	.0005
Bad Books	Academic Procedure				
	Overall		n.s.	.17	.002
	On task			.14	.01
	Assistance			.12	.02
	Routine			.19	.0006
Good Books	Social Procedure				
	Overall		n.s.	.11	.05
Bad Books	Social Procedure				
	Overall		n.s.	.20	.0002
	Materials			.11	.05
	Place			.15	.005
	Lining Up			.18	.001
	Turn Taking			.15	.007
	Cleaning Up			.16	.003
	Noise			.16	.003
Good Books	Social/Moral				
	Overall		n.s.	.12	.03
	Aggression			.24	<.0001
	Including Others			.11	.05
	Playing fair			.12	.03
Bad Books	Social/Moral				
	Overall		n.s.	.11	.04
	Sharing			.14	.008

Table 9

Perceptions of reasons for norms:

Percent of children mentioning each reason type by domain and issue*

	REASONS					
	Intrinsic		Extrinsic			
	Intrinsic	Welfare	Extrinsic-Social	Extrinsic-Other	Reward/Punishment	Rules
Academic Outcome						
Issue						
Math Content	47.1[a,c]	4.0	10.2	24.4	29.8[a,c]	4.9
Language Content	44.9[a,c]	4.0	11.6	26.2	27.1[a,b,c]	5.3[b]
Language Format	19.7	44.1[a]	6.7	7.6	7.1	6.3[b]
Math Format	8.8	40.7[a]	9.7[a]	37.5[a]	15.3[a]	7.4
Other Content	31.9[a,c]	10.2[c]	23.6	9.7	25.9[a,c]	5.6
Academic Procedure						
Issue						
On-task	33.2[a,b,c]	2.1	8.4	32.8[a]	44.5[c]	5.0[c]
Assistance	10.5	45.0[a]	6.7	16.8[b]	15.1	20.2
Persistence	49.2[a]	2.9[c]	4.6	24.4[b]	19.7	12.6[a]
Readiness	28.2	8.4	2.5	45.8	15.5	5.5
Routine	26.4	2.8	4.2[a,b]	46.8[a]	20.4[c]	9.3
Completion	20.4	3.2[c]	3.7	50.0[b]	31.0[a,c]	4.2

ferences in proportion of children mentioning each reason by sex, age, and socioeconomic status.

a=grade
b=sex
c=SES

Table 9 (continued)

	REASONS					
	Intrinsic		Extrinsic			
	Intrinsic	Welfare	Extrinsic-Social	Extrinsic-Other	Reward/Punishment	Rules
Social Procedure						
Issue						
Materials	3.6	65.3[a]	6.2[a]	14.2	13.8[a]	11.1[b,c]
Place	15.6	23.6[a]	6.7	22.2	33.8	12.9
Lining Up	4.9[a]	31.6[a,b]	21.8	16.0[a]	32.0	12.4
General	9.7	55.0[a,b]	8.4[c]	10.1	30.3[a,c]	18.1[b]
Turn Taking	2.5	52.9[a,c]	12.6	9.2[a]	19.7[c]	22.3
Role	7.6[b]	51.3[a]	13.0	16.0	20.6[a]	17.2
Lite	37.5	6.9[a]	4.6	38.4[a]	24.1[a,b]	2.8
Cleaning Up	8.8[a]	52.8[a]	13.4	21.8[b]	19.4[c]	11.1[c]
Noise	17.1	63.4[a,c]	6.0	12.0	19.4	6.0
Social/Moral						
Issue						
Comforting	12.9[c]	54.7[a]	19.1	0.4	2.2	14.7[b]
Aggression	4.4	52.4	19.1[a,c]	26.2	28.4[a,b,c]	10.7
Lying	8.0[a,c]	41.8[a]	16.9[a]	7.6	45.3[a]	11.1
Sharing	19.1[a]	50.7	32.9[a]	4.0	4.4[c]	18.2
Including Others	8.0[a]	61.3[a]	21.8	5.3	2.7	10.2[b]
Playing Fair	49.2[a]	22.7[a]	26.5	14.7	13.9[a]	25.6
Cheating	39.4[a,c]	8.3	7.9	37.5	25.0[c]	13.0
Stealing	13.9[a]	42.6	6.0	4.2	31.9[b,c]	30.1
Tattling	3.8	13.9[a]	14.3[a]	2.5	6.3	9.7[b]
Teasing	1.9	36.6	10.2	1.4	6.0	6.5

Table 10

Consistency between importance and feelings ratings plus consistency differences by grade, sex, and social class.

Consistency measure	Overall r	Significant partials for effect of: Grade (1/5)	Sex (M/F)	Class (middle/working)
Overall	.54	.35[c]	-	.18[c]
Overall good	.47	.29[c]	-	.21[c]
Overall bad	.57	.36[c]	-	-
Academic performance	.51	.26[c]	-	.12[a]
-good	.41	[illegible][b]	-	.18[b]
-bad	.42	.23[c]	-	-
Academic procedure	.44	.18[c]	.13[a]	-
-good	.36	.14[a]	-	-
-bad	.42	.20[c]	-	-
Social procedure	.50	.18[b]	-	.21[c]
-good	.42	.15[b]	-	.18[b]
-bad	.50	.14[a]	-	.16[b]
Social/moral	.52	.33[c]	-	.15[b]
-good	.42	.22[c]	-	.15[a]
-bad	.55	.38[c]	-	-

a) $p \leq .05$

b) $p \leq .01$

c) $p \leq .001$

Table 11

Partial correlations for significant main effects of teacher talk variables on children's importance ratings

	A. Domain and Issue	Percent Academic Performance Attributions	Significance Level
Good Books	Academic Performance		
	Overall	.12	.02
	Math Content	.16	.002
	Math Format	.11	.05

	B. Domain and Issue	Percent Academic Procedure Expectations/ Sanctions	Significance Level
Bad Books	Academic Performance		
	Overall	.15	.005
	Other Content	.18	.002
	Language Format	.12	.03
Bad Books	Academic Procedure		
	Overall	.12	.03
	On Task	.11	.04
	Assistance	.13	.02

	C. Domain and Issue	Percent Social Procedure Expectations/ Sanctions	Significance Level
Good Books	Academic Performance		
	Overall	-.20	.0002
	Math Content	-.14	.008
	Language Content	-.12	.02
	Other Content	-.15	.006
	Language Format	-.18	.001
	Math Format	-.15	.005
Bad Books	Academic Performance		
	Overall	-.16	.003
	Math Content	-.12	.02
	Language Format	-.12	.03
Good Books	Academic Procedure		
	Overall	-.14	.009
	On Task	-.15	.005
	Assistance	-.12	.03
	Completion	-.12	.02
Good Books	Social Procedure		
	Overall	-.18	.001
	Materials	-.12	.02
	Place	-.19	.0006
	Lining Up	-.13	.01
	General Social Procedure	-.24	<.0001
	Role	-.11	.05

Table 12

Partial correlations for main effects of percentage academic performance, percentage openness, and their interaction.[a]

	Domain and Issue	Percent Academic Performance	Percent Open	Academic Performance X Open
Good Books	Academic Performance			
	Overall	.13	-.15	.19
	Math Content	n.s.	-.18	.16
	Language Content	.13	n.s.	.15
	Language Format	.12	-.11	.13
	Math Format	n.s.	n.s.	.19
Bad Books	Academic Performance			
	Overall	n.s.	-.14	n.s.
	Language Content		-.14	
	Language Format		-.15	
Good Books	Academic Procedure			
	Overall	.20	n.s.	.16
	On Task	n.s.		.19
	Assistance	.12		.13
	Persistence	.18		n.s.
	Readiness	.15		n.s.
	Routine	.22		n.s.
	Completion	.11		.14
Good Books	Social Procedure			
	Overall	.15	-.12	.13
	Materials	.12	n.s.	n.s.
	Place	n.s.	-.19	.12
	Lining Up	n.s.	-.12	n.s.
	General social procedure	n.s.	-.17	n.s.
	Turn taking	.12	n.s.	.12
	Role	.14	n.s.	n.s.
	Late	.20	n.s.	.11
	Cleaning Up	.11	n.s.	n.s.
	Noise	.17	n.s.	n.s.
Good Books	Social/Moral			
	Overall	.17	n.s.	.16
	Comforting	.15		n.s.
	Aggression	n.s.		.15
	Lying	n.s.		.11
	Sharing	.11		.13
	Including Others	.15		n.s.
	Playing fair	n.s.		.13
	Cheating	.13		n.s.
	Stealing	.17		.13

a) Partials for percent academic performance and percent open are reported from equations in which grade and social class were entered first hierarchically as controls. To simplify the number of terms involved, the partials for the interaction were obtained from an equation in which just grade, the two independent variables, and their interactions were entered first hierarchically.

Table 13

Effects of classroom management and openness on intrinsicness of children's reasons: Hierarchical regressions.

(a) Significant partial correlations from grade, social class, and managerial efficiency analysis.

Variable	Partial	Significance
Grade	.29	< .0001
Social class	-.20	.0002
Grade x Manag.	-.25	< .0001

(b) Significant partials from grade, social class, and openness analysis.

Variable	Partial	Significance
Grade	.29	< .0001
Social class	-.20	.0002
Openness	.21	.0001
Grade x Openness	-.17	.002
Grace x Class x Open	.13	.02

(c) Significant partials from grade, managerial efficiency, and openness analysis.

Variable	Partial	Significance
Grade	.29	< .0001
Openness	.28	< .0001
Grade x Manag.	-.14	.007
Grade x Openness	-.12	.03

Table 14

Cell means and marginals for responsibility assigned by domain of incident and by four levels of goodness-badness of act.*

	Quality of Act				
Domain:	Extra-good	Good	Bad/Excuse	Bad	
Academic Performance	2.87	2.92	7.88	8.37	5.51
Academic Procedure	3.04	3.22	8.21	8.45	5.73
Social Procedure	3.42	3.15	8.11	8.70	5.85
Social/Moral	2.78	2.73	8.90	9.01	5.86
	3.03	3.00	8.28	8.63	

*Scores ranged from 1 = highly praiseworthy through 6 = neutral (no praise or blame assigned) to 11 = highly blameworthy.

Table 15

Cell means and marginals for responsibility assigned by domain of incident and by goodness-badness of act, omitting role incidents from social procedure domain.*

	Quality of Act				
Domain:	Extra-good	Good	Bad/Excuse	Bad	
Academic Performance	2.87	2.92	7.88	8.37	5.51
Academic Procedure	3.04	3.22	8.21	8.45	5.73
Social Procedure	3.10	3.16	9.01	8.84	6.03
Social/Moral	2.78	2.73	8.90	9.01	5.86
	2.95	3.01	8.50	8.67	

*Scores ranged from 1 = highly praiseworthy through 6 = neutral (no praise or blame assigned) to 11 = highly blameworthy.

Table 16

Significant partial correlations of demographics with responsibility judgments by domain and goodness-badness of stimulus: Hierarchical analyses with grade, sex, and social class.

	Good Stimuli*			Bad Stimuli		
Domain:	Variable	Partial	Signif.	Variable	Partial	Signif.
A. Academic Performance	Grade	.45	<.0001	Grade	-.48	<.0001
	Class	-.19	.0003	Class	.19	.0003
B. Academic Procedure	Grade	.39	<.0001	Grade	-.39	<.0001
	Sex	-.11	.049			
	Class	-.11	.043			
C. Social Procedure	Grade	.39	<.0001	Grade	-.39	<.0001
	Sex	-.18	.0007	Sex	.13	.02
D. Social/Moral	Grade	.46	<.0001	Grade	-.42	<.0001
	Sex	-.12	.03	Sex	.14	.10
	Class	-.14	.009			

*Since praiseworthiness ranged from a low number (1) to neutral (6), negative partials indicate assigning more praise; for blameworthiness, ranging from neutral (6) to high blame (11), positive partials indicate assigning more blame.

Table 17

Regressions predicting responsibility judgments from teacher talk variables: Hierarchial analysis including grade, teacher variables, and their interactions*

A. Percent academic performance attributions: Academic performance good stimuli.

Variable	Partial	Significance
Grade	.45	<.0001
% Attributions	.06	-
Grade x Attributions	-.12	.03

B. Percent academic procedure expectations/sanctions: Academic performance good stimuli.

Variable	Partial	Significance
Grade	.45	<.0001
% AP Expec/Sanc	-.04	-
Grade x AP Expec/Sanc	-.11	.035

C. Percent social procedure expectations/sanctions: Academic performance good stimuli.

Variable	Partial	Significance
Grade	.45	<.0001
% SP Expec/Sanc	.13	.02
Grade x SP Expec/Sanc	-.07	-

D. Percent social procedure expectations/sanctions: Academic performance bad stimuli.

Variable	Partial	Significance
Grade	-.48	<.0001
% SP Expec/Sanc	-.03	-
Grade x SP Expec/Sanc	.21	.0001

*Since praiseworthiness ranged from 1 (high) to 6 (neutral), negative partials indicate assigning more praise; for blameworthiness, ranging from 6 (neutral) to 11 (high blame), positive partials indicate assigning more blame.

Table 18

Partial correlations for significant main effects of teacher percentage negativity, percentage openness, and their interactions from hierarchical regressions with grade and social class.*

	Good Stimuli			Bad Stimuli		
Domain	Variable	Partial	Signif.	Variable	Partial	Signif.
A. Academic Performance	Class x Neg.	-.22	<.0001	Grade x Neg.	.12	.02
				Grade x Open	.17	.003
				Class x Neg.	.15	.005
B. Academic Procedure	Class x Neg.	-.17	.002	Grade x Neg.	.11	.04
				Class x Neg.	.19	.0007
C. Social Procedure	Grade x Neg.	-.11	.05	Class x Neg.	.14	.009
	Class x Neg.	-.11	.04	Class x Open	-.12	.03
				Grade x Class x Neg.	-.11	.04
D. Social/Moral	Negativity	.12	.02	Grade x Class	-.12	.03
	Class x Neg.	-.21	.0001	Grade x Open	.12	.03
				Class x Neg.	.16	.003

*Coefficients are reported from four-way analysis (Grade x Social Class x Negativity x Openness) where effect was also significant in three-way run(s). For brevity, grade and class coefficients are omitted; as regressions were hierarchical, grade effects were identical and class effects virtually identical to those already reported in Table 16. As in Table 16, since praiseworthiness ranged from a low number (1) to neutral (6), negative partials indicate assigning more praise; for blameworthiness, ranging from neutral (6) to high blame (11), positive partials indicate assigning more blame.

Table 19

Correlations between children's demographic characteristics and elements of the justice model*

Justice Model	Grade (1/5)	Sex (M/F)	Class (M/W)
r_{io}	$-.35^{d}$	$.19^{c}$	$-.10^{a}$
r_{iI}	$-.39^{d}$	$.16^{b}$	$-.08$
r_{oO}	$-.33^{d}$	$.17^{b}$	$-.07$
partial r_{io}	.02	.00	-.05

*Results show correlations of each demographic with, respectively, the individual level correlation between inputs and outcomes; the correlation of individual input evaluations and group average evaluations; the correlation of individual outcome evaluations and group average evaluations; and the partial r controlling for the fit around the model of Figure 1b (i.e., correlated deviations from this model).

[a] $.05 < p < .10$

[b] $p \leq .01$

[c] $p \leq .001$

[d] $p \leq .0001$

7 Teacher Talk and Student Thought: Socialization into the Student Role

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In modern societies systems of formal schooling are charged with the dual responsibilities of providing academic training and citizenship training. Some of the socialization of scholars and citizens is expected to occur in the home; but a large, and probably increasing, proportion of the burden of this socialization falls on our teachers. Researchers probing the effectiveness of our schools have tended to focus on one or the other of these dual concerns. For example, those concerned with academic achievement generally examine the effects of particular curricular content or instructional methods (e.g., Doyle, 1978; Posner, 1974; Walker & Schaffarzick, 1974). Others whose concerns are social tend to investigate outcomes resulting from participation in student government, exposure to moral training programs, or use of techniques for modifying disruptive classroom behaviors (e.g., Bar-Tal & Saxe, 1978; Kounin, 1970; Rest, 1974; Simon & Kirschenbaum, 1973). What remains to be done is a simultaneous examination of socialization for both scholarship and citizenship from the point of view of both the agent and the target of this effort: teacher and child.

Researchers agree that somehow teachers influence the development of scholarship and citizenship through day-to-day communication of expectations in the classroom (cf. Brophy & Good, 1974). In this day-to-day interaction lies a thread unifying the two concerns and two functions of education. To impart academic knowledge, teachers must also get children to attend to tasks, to persevere when requirements seem difficult, and to complete assignments. To create

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citizens, they must foster adherence to both procedural norms governing orderly life in the classroom and general social/moral norms embodying concern for the rights and welfare of others. The underlying common process is successful socialization of the child into the role of student. Yet relatively little is known about the daily accretions that turn children into students.

The present chapter reports on an interdisciplinary study of this socialization process. It is a preliminary report in that we cover only the first two years of longitudinal data gathering and discuss only two types of data out of an overall total of eight.[1] We are focusing on the effect of teachers' socializing communication on children's views of norms for classroom life on teacher talk, student thought, and the link between the two.

The overall model within which we are working can be summarized briefly. Everyone agrees that roles are learned. Yet the vocabulary of the "role theory" literature is metaphorically rich and scientifically sloppy (cf. Biddle, 1979; Biddle & Thomas, 1966). The central scientific meaning of role appears to be action within a prescribed social position or status. Roles are socially determined, in that groups have expectations for how role occupants *ought* to behave and *will* behave. Roles are socially understood, in that group members give common descriptions of action within role. Roles are socially learned, in that people learn appropriateness of behavior through direct or vicarious rewards and punishments. Thus there are three logically exhaustive components of a role to be observed: prescriptions for action (what *should* you do?); descriptions of action (what *did* you do?); and evaluations after action (what did the others think of it?) (cf. Thomas & Biddle, 1966, p. 28).

These components are also isomorphic with a recent model of human responsibility judgments (Hamilton, 1978; Hamilton & Sanders, 1981). The model argues that judgments of responsibility—i.e., accountability or liability for sanctions—involve normative or role *expectations* and *deeds* performed or omitted as determinants of *sanctions*. The data indicate that one is indeed liable both for what one did and for what one should have done, as the model predicts. This model deals with adults and already-socialized members of a group. But to learn a role in the first place is to learn its boundaries—what things garner praise, what things evoke blame. Thus the elements of a model of responsibility judgments for the already-socialized can also be seen as the crucial elements for the learning of a role.

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[1] In addition to the data reported here, data gathering included extensive ethnographic field notes on teacher and student activities in 12 of the classrooms; sociometric choices of friendship for classmates; interviews with students concerning reasons why various norms were important to follow; questionnaires to students embedding experimental variations of norms previously investigated, with children asked to judge responsibility and sanctions; targeted observations of children selected from teachers' evaluations as particularly good or disruptive students; and questionnaires to teachers that included the responsibility experiments presented to their students plus teacher assessments of math and verbal achievement for each child.

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Given a traditional psychological approach to the components of this model, two theoretical literatures would appear relevant: the social psychological area of attribution theory, where decisions about how to describe an event, assign causality for it, and determine responsibility have been studied; and of course, social learning theory, where basic psychological findings regarding learning processes are applied and modified to accommodate human learning in social contexts. But two further concerns of great relevance to the theoretical model and the present research design are sometimes slighted in educational applications of attribution or social learning. The first concern, represented in recent educational literature on classroom management and in traditional sociological work on organizations, is the structural question of how the teacher's managerial role and the task structure she implements determine the effectiveness of her socialization practices.[2] The second concern, often appearing under the rubric of "individual differences" in psychological treatments, is the issue of how the teacher's impact may differ depending on certain key characteristics of the pupils. (In the present study we chose to focus on age, social class, and sex as potentially crucial differentiators of children's student role socialization.) We briefly summarize salient findings and predictions from these relevant literatures before turning to a description of the study itself.

Attribution Theory: Teacher Descriptions and Evaluations

"Attribution theory" is by now a generic label for an array of theories of how humans judge causality or responsibility and a large number of empirical applications of such theories (see, e.g., Harvey, Ickes, & Kidd, 1976, 1978). Although a substantial body of the empirical work in this area has been focused on children or teachers, actual observation of attribution processes in the classroom context has been relatively rare (e.g., Blumenfeld, Hamilton, Wessels & Falkner, 1979; Cooper, 1979; Dweck, Davidson, Nelson, & Enna, 1978). Thus we must draw on general predictions from the literature, with some information from prior studies concerning the likely results in a classroom setting.

If the teacher is to socialize children about student role expectations, one of the things she must do is discuss or describe classroom behaviors: the deeds, or "what happened," part of the role/responsibility model. Although such descriptions are in general potentially important as socializing information, descriptions also typically either embed an implicit judgment about causality or involve some follow-up judgment. And attribution theories provide evidence that causal judgments are not evaluatively neutral (e.g., Heider, 1958; Jones & Davis, 1965; Kelley, 1967, 1973). First, causal judgments are typically made or sought when

[2] The teacher is referred to as "her" ("she") throughout for convenience, as all but one of the teachers involved are female.

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the event in question was one calling for evaluation or sanctioning. In addition, in the allocation of causality itself, the perceiver indicates what was seen as controlling or producing the event. Attribution of outcomes to internal causes leads people to see themselves as personally responsible for outcomes, which can be psychologically satisfying—especially when the outcome in question was a positive one (e.g., deCharms, 1968; Weiner, 1972). Thus attributions may be positive or negative in their direct evaluative implications as well as internal or external in their control implications, with potential positive connotations to internality. In sum, attributions represent potentially key—if non-neutral—aspects of teacher descriptions of events. Their power as influence tools is suggested by the recent finding that making appropriate attributional statements to a child can be more effective in changing that child's behavior than more conventional persuasion strategies (Miller, Brickman & Bolen, 1975).

The very few studies of attributions in classrooms indicate that both the overall preponderance of focus on positive versus negative classroom events and the type of events focused on—academic versus other more procedural concerns—may alter the effectiveness of a teacher's communication (e.g., Blumenfeld et al., 1979; Dweck et al., 1978). Thus the importance of attributions may include their channeling of student definitions of the role itself, as well as their communication to the student about control and their contribution to self-concept. We have therefore selected causal attributions as an important locus of further information in teacher talk of a descriptive sort. In doing so we of course accept the inevitable interweaving of expectation and evaluation that occurs in description itself, despite the logical separation of these components suggested in the role/responsibility model.

Social Learning: Teacher Sanctions and Expectations

Certain basic social learning principles suggest a strategy for producing behavioral conformity in the classroom. Frequency, consistency, and intensity of praise and criticism should influence the degree of children's conformity to teacher desires (e.g., Bandura, 1969; Cartledge & Milburn, 1978; Clarizio, 1971). In general, consistent use of social evaluations coupled with appropriate behavioral sanctions, delivered in a manner that focuses children's attention on the behavior in question, should result in high conformity to that particular expectation. However, overall frequency of sanctioning need not be a good predictor of conformity, as its effects may be attenuated by inconsistency of response or by failure to draw appropriate attention to the behavior (Bandura, 1969, 1977; Mischel & Mischel, 1976; Parke, 1969, 1970). Blame or punishment that appears noncontingent on the child's behavior can even have severely negative effects (Seligman, 1975). Thus it need not be surprising that low correlations between sheer use of sanctions and children's level of misbehavior have been reported (Kounin, 1970).

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But overt conformity is not the usual goal—or certainly not the only goal—proposed for socialization in the schools. Long-term stability of behavior rests on internalization of the socializer's goals by the socializee, and the use of explicit rewards and punishments may even act to retard that internalization process. Overreliance on threats or sanctions appears to create busy learners, but not necessarily motivated or interested ones (Covington & Beery, 1976). Even the provision of external rewards or incentives as a justification for children's behavior can decrease their intrinsic interest in a task (Lepper, this volume; Lepper & Green, 1975; Pittman et al., this volume). Thus the teacher who socializes by carrying "carrots" and wielding "sticks" would appear to be endangering the long-term enterprise of socialization itself.

The use of rewards and punishments per se need not work in opposition to internalization, however. Discipline methods may promote internalization by communicating expectations about appropriate behavior, by providing alternative and more acceptable modes for reaching goals, and by sensitizing the child to effects of actions on others (Aronfreed, 1963, 1969, 1976; Hoffman, 1970a,b). A discipline style that utilizes inductions—explanations of the reasons for following rules in terms of consequences to others—appears to be a highly effective strategy for producing internalization. Such a style induces a humanistic orientation rather than a conventional orientation to rule violation and focuses on the spirit of the rule rather than the letter of the law (Hoffman, 1970a). Overall then, the consistent, judicious, and inductively-oriented use of sanctions would appear to be crucial to the internalization process.

Given the importance of inductions in a social learning approach to student role socialization, social learning proves to be relevant to understanding the impact of teacher expectations as well as sanctions. Inductive explanations are a subcategory of all explanations; and as long as the explanations focused on are those involving why students should or should not behave in a particular way, then they are logically prescriptive or expectation statements that simply provide further reasons or rationales. In terms of the role/responsibility model, social learning thus may provide the key to implementing the prescriptive and sanctioning portions of the model. Therefore, we have chosen to focus on all teacher sanctions—or their threat or promise—and on all teacher communication regarding expectations, including further "why" information. Social learning theory and findings would suggest that either or both of these may affect children's learning and internalization of the student role.

Management and Task Structure: Macrolevel Social Learning Problems

When looking at teacher behavior within a particular classroom, or even at comparisons among teachers, educators and psychologists often utilize some version of the social learning approach. The overwhelming importance of main-

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taining classroom order and effective discipline naturally leads toward that perspective. A further step in that direction has also been made relatively recently. As evidence emerged that effects of such variables as classroom "climate" or teacher "warmth" on children's academic and social outcomes were apparently slight, researchers began to pay serious attention to Kounin's (1970) argument that maintaining orderly procedures for learning by the *group* is necessary for achievement by individuals within it (see also reviews by Dunkin & Biddle, 1974). Organizational questions therefore begin to emerge, and researchers turn more attention to sociological literatures on groups, organizations, management, and authority (Duke, 1979).

It is a relatively simple matter to bridge the apparent conceptual gap between teacher-child dyadic reinforcement and the group-level issues. First, looking within a given classroom, teacher reinforcers to the group can readily be viewed in terms of direct and vicarious reinforcement to given individuals. More importantly, the sociological concepts of the *role structure* within which the teacher operates as a manager or authority figure and the *task structure* which she sets up for carrying out the role can be viewed as environmental constraints that may govern reinforcement patterns. The role structure is a constraint on the teacher; the task structure is a constraint both on students and on the teacher herself, insofar as it governs the allocation of time and mode of teaching. Investigation of socialization into the student role should thus attempt to take into account the macrolevel problems of the constraints of role and task structure. Fortunately, there are helpful guidelines available in recent educational literatures on "classroom management" and "teacher effectiveness."

An excellent historical and conceptual overview of the question of the teacher's role is provided in Johnson and Brooks (1979). They first outline the development of the American school from the undifferentiated "one room schoolhouse" to the modern bureaucratic organization, a change achieved in many areas by the turn of the last century. Such bureaucratization, of course, is generally characteristic of industrialization and its accompanying urban migrations. The theoretical and practical importance of this change is that the modern school must properly be considered as a bureaucracy in which teacher behaviors may be governed by formal role constraints. The teacher is in a hierarchy, acting both under the supervision of the principal and other administrative figures and *as* supervisor of the behavior and productivity of the students taught. Thus in a very real sense even the child entering school faces an organization in which the teacher is structurally a manager and the student a worker.

There are a number of ways in which the school is an unusual bureaucracy, of course, including the key fact that the child is simultaneously worker and "product" (a general characteristic of socializing institutions). The teacher's managerial task is also complex in that society expects both scholarship and citizenship to be part of this final product. As Johnson and Brooks describe this latter tension,

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> All managers have to arrange working conditions so that workers are at least minimally satisfied, through having basic personality needs met, but teachers are additionally expected to manage the situation in such a way that the workers (pupils) learn to assume increasing responsibility for carrying out, with diminishing supervision, both the work of the classroom and activities outside of school. *The most distinctive feature of the classroom may be this dual concern with both discipline for learning and learning of discipline.* (1979, p. 28, emphasis added)

In our terminology, scholarship and citizenship can make a difficult managerial mix.

Evidence ranging from Kounin (1970) to other more recent sources suggests that a teacher's effectiveness as a manager has payoffs in students' academic progress as well as their conduct (see review by Brophy, 1979). Despite the apparent difficulty of the managerial mix involved in the teacher's role, some of the payoff from good management results because "good managers also tend to be good instructors, and vice versa," given the similar skills in preparation and organization involved in both (Brophy, 1979, p. 736). What remains to be seen is the extent to which indicators of managerial effectiveness may also relate to children's thoughts and feelings about the student role itself.

The teacher's managerial role and especially control behaviors are also differentiated and shaped by the types of tasks employed during instruction (e.g., Bossert, 1977, 1978, 1979; Doyle, 1978). This is not surprising, for to the extent that different instructional patterns involve different managerial tasks, then teachers may attend to and respond to different student behaviors. For example, in situations where all children are required to sit quietly, face front, and direct undivided attention on the teacher, such acts as squirming, whispering, daydreaming, and other minor disruptive behaviors are likely to meet with disapproval. In a less structured setting, teachers may be freed from such procedural concerns to attend more to purely academic or general citizenship issues. Alternatively, teachers in traditional and "open" classrooms may divide their concerns similarly between the issues of scholarship and citizenship but attend to different aspects of these. It is clear, however, that the what, when, where, and how of work organization can influence specific teacher expectations for classroom life. Thus, what actually constitutes acceptable student role behavior may vary with task structure, and teacher communication concerning that role should vary concomitantly.

The question of task structure has, of course, been a subject of much debate in recent years, as advocates of "traditional" versus "open" instruction have debated their merits—often in the absence of clear definitions of either or without clear-cut dependent variables in mind (Horowitz, 1979; Marshall, 1981; Wright, 1975). Some recent research suggests, however, that a more structured or traditional approach is more effective for academic performance, particularly in the early grades where children have difficulty managing learning on their own (see

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review by Brophy, 1979). Yet for children's internalization of classroom norms, their feelings about these norms, and the whole arena of citizenship as opposed to scholarship, the effects of task structure are still open questions. Thus task structure appears to be a potentially important determinant of student role socialization, one that is logically distinct from managerial effectiveness per se and one whose impact cannot yet be predicted.

Differentiating Components of the Student Role

The management and task structure literatures suggest that we should look at how the teacher defines the student role itself; and the social learning and attribution literatures suggest that we look at particular types of communication about that role as theoretically important socializing tools. Yet a variety of clues within each of these literatures also indicates that the student role should be examined in terms of a number of distinct components or domains of classroom life. We have already noted the fundamental dichotomy between scholarship and citizenship in the student role, but a more fine-grained view is needed.

The central defining characteristic of the student role is clearly an academic one. However, the teacher must impart means as well as ends, training the child in how to learn as well as what to learn. Thus even academic instruction can profitably be divided into content versus procedures for operation. On the citizenship side, given that the classroom is a group setting, social procedures for working with or in the presence of others must be instilled. And moral norms must be enforced, in the classroom just as anywhere else in the society. Ranging from those most specific to the setting to those most general to society, the expectations to be conveyed by the teacher can thus be conveniently divided into four categories or domains: *academic performance, academic procedure, social procedures, and social/moral norms*. Important empirical questions include the extent to which teachers emphasize one type of issue versus another, the extent to which socializing strategies in one domain resemble those in another, and the extent to which teachers have impacts on students across domains. Thus we have chosen to look at structural determinants of "teacher talk," at information carried in teacher talk, and at its effects on student thought in terms of these different domains of classroom life.

Differentiation Among Students

Whatever the teacher's understanding of components of the student role, and however she is influenced by managerial concerns or task structure in communicating it, the recipients of that communication are not interchangeable blank slates. Children are cognitively and socially differentiated in ways that may influence both the teacher's behavior and the child's understanding of the student role. The variables that we chose to focus on were the child's age, sex, and social

class. We discuss these and present results pertaining to them in this order, as we anticipated the largest differences would be due to age and the smallest to social class.

The child's *age* may affect both the teacher's behavior, because the teacher makes different assumptions about what the child has already learned about the role, and the child's understanding, because of the child's level of cognitive development. Taking two grade levels where children are reasonably separated in both school experience and cognitive development, first versus fifth grades, we can explore both teacher behavior and children's comprehension of the student role.

Teacher behaviors and expectations are likely to differ across grade levels. Teachers in early grades, especially first grade, might be forced to spend a relatively large proportion of effort on instilling procedural norms, both academic and social. Teachers in higher grades may be spared this since children will have had several years of experience in the general setting. Teacher expectations may accordingly be less stringent in the first steps of socialization, as the teacher employs "shaping" by rewarding children for conformity to basic role expectations. Teachers in upper grades may be less likely to reward for simple conformity to role behavior or more hasty to punish for nonconformity. These differences in expectations may also lead teachers in upper grades to make somewhat different attributions, in that they have more information available to enable them to make internal attributions for failure or misbehavior. In general, the expectation that the child has the ability and knowledge to conform to the role should be related positively to attributions to personal factors as causes of nonconformity; thus as expectations shift upwards, attributions may shift inwards, toward assuming stable personal inclinations in the child.

The child's understanding of all this communication, of course, undergoes potentially dramatic shifts with cognitive development. The child entering school is probably thinking at a preoperational or early concrete operational level. The experienced student, the fifth grader, is probably thinking at a concrete operational or early formal operational level (e.g., Piaget & Inhelder, 1969). Sheer cognitive differences plus concomitant shifts in moral judgment should affect what the student absorbs and how that information is organized.

Basically, the child's differentiation of the domains of classroom life and assessments of their importance may be a function of cognitive/moral development. Differentiation and categorization of issues should be more developed in the older child. It is known that even preschool children can make some distinction between moral and purely conventional issues and understand the greater importance of moral issues (Nucci & Turiel, 1979; Turiel, 1978); but prior studies have not explored a range of classroom-relevant issues, such as concern for the procedural convenience of others, that represent an area of both importance to teachers and potential confusion to children. Further, studies of how children judge academic as opposed to moral successes and failures have just

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begun (e.g., Parsons, 1974; Weiner & Peter, 1973). Thus it is important to explore how children of different ages may assess the various aspects of the student role.[3]

In both first and fifth grades, of course, one finds that most ubiquitous differentiator of humans: the child's *sex*. So far, the primary attention in the educational literature has been on sex differences in disruptive behavior, with girls coming out as "sugar and spice" by that criterion of fulfilling the student role (see Brophy & Good, 1974). More fine-grained socialization such as that provided by teacher attributions or expectations has only recently received research attention (e.g., Blumenfeld, Hamilton, Wessels & Falkner, 1977; Dweck et al., 1978; Parsons, Kaczala, & Meece, in press). What remains undone is detailed examination across grade levels with respect to both teacher differences in type and quality of communication to boys and girls and sex differences in what children *think* is involved in being a student, given what teachers try to tell them.

The children's *social class* background also appears likely to mold how and what the teacher communicates about the student role. The educational literature indicates that teachers hold lower expectations for children from lower social class backgrounds, often differentially allocate instructional assistance, and employ more negative sanctions against lower and working class children for social behaviors (e.g., Davis & Dollard, 1940; Rist, 1970; review by Brophy & Good, 1974). The child's own preparation for school is also likely to be differentiated by class, given that middle class parents are likely to have socialized with more verbal interchanges, more verbal and induction-oriented moral training, and higher general expectations that the child act independently and self-reliantly (e.g., Boocock, 1972; Hess, 1970; Katz, 1968; Kerckhoff, 1973; Kohn, 1969). What is not known in any detail is the pattern of day-to-day interaction between the lower or working class student who may be ill-prepared and the teacher whose expectations for him or her may be low. Detailed examination of both teacher talk about the student role and children's understanding of that role is necessary for exploring effects of the subtle class boundaries of American society.

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[3]The domains of classroom life studied here have varied relationships to the moral/conventional dichotomy. Two domains, social/moral and social procedural norms, fall into the realm of citizenship; two domains, academic performance and procedure, into the realm of scholarship. The rationales for in-role behavior in the two realms are likely to differ, with citizenship issues involving consequences to others and scholarship issues consequences to the self. Overall, social/moral norms emerge as clearly moral, as the label implies. Social procedural norms are conventional, entailing behaviors designed to facilitate classroom management and to keep children in crowded rooms from interfering with one another. Academic procedural norms are also conventional, but differ from previously examined conventional norms in frequently involving consequences to self. Finally, academic performance issues have thoroughly individual consequences and in that sense differ from both the moral and conventional norms previously studied, although it is unclear the extent to which they may have moral overtones (Weiner, 1979).

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Summary of the Study Design and Goals

The goal of the overall study is a detailed map of socialization into the student role. We use a model which asserts that roles are learned by learning their boundaries—those things that lie within the role and those that exceed the expectations of others either positively or negatively. The key "other," from the child's point of view, is clearly the teacher. Thus we emphasize teacher communication about the role, "teacher talk," as the potential cause of children's judgments about the role, "student thought."

The original study design was also intended to examine variations in student role socialization produced by classroom task structure and by children's age, sex, and social class. Thus the plan called for choice of two open and two traditional classrooms in each of first and fifth grades in predominantly working versus middle class schools—for a total of 16 classrooms.[4] In the conveniently located working class schools, however, officially open classrooms were abolished before we could begin data collection. Thus we adjusted to a more mixed design, in which our predominantly middle class school district contributed two open classrooms and two not so designated classrooms at each of the two grade levels; and two predominantly working class districts were tapped for a total of ten rather than eight classrooms (five at each grade level), to obtain as much variability in task structure as possible. The measures used for structure of task organization, described later, are then based on our own observations rather than official designations and produce a continuous gradation rather than the official dichotomous labels. An indicator of managerial effectiveness is also provided from our observations.

The fundamental questions to be answered in part involve simple descriptions of teacher talk and student thought about the student role. Thus initial questions concern the distribution of teacher attention among the domains of classroom life and, to the extent feasible, among particular issues within those domains; the extent to which potentially key socializing information (expectations, attributions, and sanctions) is provided in teacher remarks; and, given social learning theory concerns, the extent to which communication is proactive or reactive, positive or negative in evaluative tone, and of low or high salience, or intensity. The differentiation of teacher talk depending on either teacher variables—managerial effectiveness and task structure—or target variables—children's age, sex, or social class—can then be explored. Children's thought about the student role can then be described, and its differentiation by children's own characteristics and by aspects of teacher talk can be examined. At that point we will have completed a first broad sweep at exploring what is in the student role as com-

[4] Class composition of the schools was determined by conversations with principals about the backgrounds of students, as well as by the general industrial characteristics of the communities involved

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municated by the teacher, what is there from the child's point of view, and what—if any—relationship exists between the two.

METHOD

Measures of Teacher Talk

The coding scheme for teacher communication is summarized in Table 7.1. The universe of statements that was coded consisted of all remarks that communicated directives about performance or feedback on performance, whether that performance was of an academic or social nature. The only teacher remarks thereby excluded were social talk, such as complimenting a student on a new dress, and sheer academic instruction, in which no statements of either role expectations or feedback were being made.[5] All remarks were recorded verbatim and subsequently coded at the level of *clauses* containing information.

All such clauses were first coded regarding the *domain* of the remark: academic performance, academic procedure, social procedure, or social/moral norms. Issues considered as falling into each domain are found in the table. Clauses were also coded for the *time* at which the remark was made (i.e., before or after child's behavior); for the *quality* of the behavior from the teacher's point of view (positive, negative, ambiguous, or not applicable—i.e., when the remark occurred before a behavior); for the *target* of the remark (girl, boy, small group, or whole group); for the *structure* of the activity being engaged in by the child and teacher; and for the *salience* of the teacher's remark (essentially whether she appeared to be upset or excited and deliberately drew class attention to it).

Within this universe of communication, some embedded further information to the target: expectations, attributions, or sanctions. These were differentiated as described in the table. Categories used for expectations and sanctions were derived from our prior observational experience, whereas categories for attributions followed closely from the literature in that area. The sole exception to the clause-level analysis is also a new attributional category, *mixed*, in which the teacher made two linked attributions at once, one of which was positive and one negative in implication. We felt that use of this combination category represented a more accurate reflection of the information imparted than would be obtained were those attributions treated as independent bits of information.

[5]It is important to note that we were interested in teachers' efforts to socialize children into a role rather than in the content or method of academic instruction. Thus, whereas other observational codes (see Dunkin and Biddle, 1974) focus on lessons and subject-matter teaching (e.g., providing examples, asking questions, explaining facts) as well as on socialization practices like praise and criticism, we exclude the former as not related specifically to role socializing activity.

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TABLE 7.1
Categorization Scheme for "Teacher Talk"

Domain and Issue. Each piece of information was categorized as to the area of classroom life referred to and the specific subject of the remark.

1. Academic performance: Statements concerning the quality or correctness of intellectual performance or referring to rationales for particular assignments. Subject matter of math, reading and other was noted as well.
   a) Format (math, reading, other): Statements related to the "correctness" of the form or format of the student's academic work.
   Example: "You forgot to put your name on the paper." "I can't read your answers, your work is so sloppy."
   b) Content (math, reading, other): Statements related to the correctness of the student's work.
   Example: "You only missed one problem, very good." "You have to have fractions to be able to do fifth grade work."
   c) Ambiguous (math, reading, other): No specific referent to correctness or incorrectness of either content or format.
   Example: "That's nice. Okay, next." (Teacher fishes for more information)–"Yes, but what about . . ."

2. Academic procedure: Statements pertaining to academic routines. These included comments about what work the children were assigned and how, when, and where they were expected to complete it. Statements in this domain were differentiated into one of eight categories.
   a) Assignment: Reference to expectations concerning what assignments students should do and how they should do them.
   Example: "Read two chapters in the green book today." "Use a pen to write this letter, not a pencil." "Everyone should try to do at least six problems on this page."
   b) On-task: Any reference to not listening when the teacher is trying to give an assignment, instructions, or information; failure to use work periods constructively.
   Example: "Please pay attention, stop chattering, you won't know how to do this later." "Get back to work now. You've almost wasted the whole period."
   c) Completion: Specifications of when work is to be finished or statements of expectations that students should complete, do so on time, and know what to do after completing an assignment.
   Example: "Try to finish this work sheet before recess." "You didn't finish the last six problems on this page."
   d) General routine: Statements concerning what students should be doing when.
   Example: "Do your math first, then spelling." "You should be working on your reading now, not your science."
   e) Assistance: Reference to expectations that students should follow proper procedures for getting help with work or complete assignments independently.
   Example: "Put your name on the board, if you need help." "You can ask someone who is finished for help."
   f) Persistence: Reference to expectations that students should not give up easily on a difficult task.
   Example: "This is hard, so you'll have to try." "These problems are tough; you'll have to work hard."

(*continued*)

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TABLE 7.1 (*Continued*)

g) Readiness: Reference to expectations that students should be prepared for work by having the correct materials (e.g., pencils, paper, books, etc.) or by having the prerequisite assignment or homework completed.
Example: "This is the fifth time you forgot your math book, you'd better remember it tomorrow."

h) General academic procedure issues: Reference to other types of expectations related to academic procedures (e.g. where to put assignments) that do not fit into one of the above categories.

3. Social procedure: Statements pertaining to classroom social rules and routines. These included comments about conduct that facilitated or interfered with the teacher's, other students', or one's own activities by failure to adhere to common organizational practices. These were differentiated into five issues.

a) Care of classroom and classroom materials: Reference to expectations that students should keep the classroom neat, take care of classroom materials, and use them properly.
Example: "Keep the floor under your desk neat." "Put the library books back on the shelves where they belong." "Stop wasting that paper, that is all we have for the rest of the year."

b) Place: Reference to expectations concerning where students should perform certain activities or where students should be in the classroom at a particular time.
Example: "That's right, you can use the glue in the art area." "What are you doing wandering around back here? You should be at your seat." "Karen, I called your reading group to come up to my desk, why aren't you up here?"

c) Role: Reference to expectations that students should perform tasks associated with an assigned job (e.g., line captain, librarian, sanitation engineer) or that they should not overstep the boundaries of the student role.
Example: "This is the second time you forgot to check the bathrooms, I guess I'll give the job to someone else." "It's not your place to tell the janitor about this, I'll take care of it."

d) Talking: Reference to (1) high level of noise; (2) following procedures for raising hands or interrupting; (3) opening mouths when it is quiet time; etc.
Example: "Shh. I can't hear because you're so loud." "Don't interrupt, be careful to raise your hand." "It's not your turn to recite."

e) General social procedural issues: Reference to other types of expectations related to the social organization of the classroom that do not fit into one of the above categories (e.g., lining up, closing the door, hanging up coats).

4. Social/moral: Statements referring to behaviors of an interpersonal nature which involve the rights and welfare of others, either physical or psychological. Statements in this domain were differentiated into four categories.

a) Sharing: Reference to the expectation that students should share their personal property with others.
Example: "Billy, you can't eat the candy in your desk unless there is enough for everyone."

b) Lying or cheating: Reference to the expectation that students should be fair and not lie or cheat.
Example: "You had four turns; it's against the rules to have more than two." "Look at your own paper, or I'll take it away. This is a test."

c) Physical aggression: Reference to the expectation that students should be fair and not bite, hit, push, kick, or otherwise physically hurt others.

(*continued*)

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TABLE 7.1 (*Continued*)

d) Respect for others: Reference to expectations that students should be thoughtful towards others and should not tease, provoke, or otherwise hurt the feelings of others.
Example: "Don't call her "four eyes," it's not nice." "That was nice of you to help Billy fix the model."

Time. All statements were differentiated into one of two categories:

1. Proactive (before): Statements made prior to an event which served to encourage appropriate behavior and define and explain expectations.
2. Reactive (after): Statement made subsequent to an event or in response to a particular action.

Quality of Behavior. Statements were differentiated into one of four categories:

1. Positive: Statements referring to expected or accomplished good performance or appropriate behavior.
2. Negative: Statements made in anticipation of or in reaction to poor academic performance, failure to adhere to classroom procedure, or antisocial behavior.
3. Ambiguous: Statements referring to academic performance that do not communicate clearly whether the outcome was positive or negative such as, "Uh, huh."
4. Not applicable—neutral statements which communicate what work is to be done.

Target: Statements were differentiated according to the person(s) to whom they were addressed (a female, a male, a small group, or the whole group) and whether the target was working or not working with the teacher at the time.

Child Activity. The organization of activity (activities) of the class when the statement was made were delineated into five categories.

1. Class: Students are engaged in discussion or recitation as a group.
2. Individual Seatwork (same): Students are working individually on the same assignment.
3. Individual Seatwork (different): Students are working individually on different assignments.
4. Small Group: Students working in small groups for a common product (game, play).
5. Free Time: Students have free time/choice.
6. Combinations were noted when the children were engaged in a variety of different activities.

Teacher Activity. What the teacher was doing when the remark was made was coded as:

1. Recitation: Teacher is working with the whole class, reviewing old material, instructing or giving out assignments, organizing the day.
2. Small group: Teacher is working with a small group evaluating, reviewing old material, instructing, giving out assignments.
3. Teacher check: Teacher is moving about the room working with individuals, or students are coming up individually to her desk for assistance or checking, or the teacher is doing administrative work.
4. Class: Teacher is observing whole class activity, such as show and tell or free time, without much participation herself.

(*continued*)

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TABLE 7.1 (*Continued*)

Salience. All statements were differentiated as to the amount of attention they commanded. They were categorized as:

1. Low: Statements made in normal tone of voice.
2. Medium: Statements where the teacher raised her voice somewhat.
3. High: Statements where the teacher was clearly angry, screamed, or shook a child.

Informatives. Each communication that contained further information—expectations, attributions, or sanctions—was further coded at the clause level according to the following categories:

1. Expectations. Reasons for behavioral expectations or evaluative feedback which did not include attributional reference were coded into four categories:
   a) Rule: Statement of social or procedural norms that offer no rationale beyond the fact that the norm is to be followed.
   Example: "Nice people don't call names." "First graders must learn to spell correctly."
   b) Consequences: Rationale for expectation by reference to effect of behavior on others or oneself.
   These are divided in five categories.
      1. Self: "If you learn to sound out words, you won't have to ask anyone for help."
      2. Others: "It makes Janey feel good when you share with her."
      3. Group: "The class is being delayed because you're talking."
      4. Teacher: "I get tired of having to pick up after you. It hurts my back to keep bending."
      5. Object: "The book will get messed up if you leave it on the floor."
   c) Circumstances: Reference to present or future conditions as the basis for requests, expectations, or evaluations.
   Example: "We're almost out of paste so be careful to use just a little bit."
   d) Authority: References to administrative ease or teacher preference.
   Example: "Do it this way. I like it better." "The principal says you must bring in slips tomorrow or no trip."
2. Sanctioning practices. Statements or actions which served to promote compliance were categorized as one of five types:
   a) Reward
   b) Promise
   c) Punishment: e.g., removal of privileges, giving extra work.
   d) Threat
   e) Redirection of action: e.g., changing a child's seat, confiscating an object, providing the child with another task.
3. Attributions. Explicit contingent or prior feedback referring to factors contributing to success or failure, including four basic categories:
   a) Motivation: Success or failure attributed to effort. These were further differentiated as to mention of positive or negative motivation (presence or absence of effort).
   Examples: "Your spelling is good. You certainly were *careful*." "You keep *forgetting* to read the instructions."
   b) Ability: Success or failure attributed to the presence or absence of stable skills or personal traits. These were divided into positive (desirable) and negative (undesirable) traits or abilities.

(*continued*)

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TABLE 7.1 (*Continued*)

Examples: "You're *not mature* enough to behave yourselves." "Your stories are *always so interesting and funny.*"

c) Mixed: Success or failure attributed to atypical performance. Comments about successful performance which imply the child usually fails or about failure which imply the child usually succeeds.
Examples: "This work is not as good as you can do." "You've been having a lot of trouble with math; I'm glad to see you got these right."

d) Unstable: Success or failure attributed to presence of some factor outside the child's control, such as illness or fatigue.

e) Task: Success or failure attributed to difficulty of the assignment or type of undertaking without negative implications for the child's ability or effort.
Examples: "They're making it *hard* on you. Now you need to multiply three columns." "This is *third grade work.*"

Observers were trained in two ways. First, sample transcripts of teacher statements taken from previous work were prepared. Observers were taught to code from these transcripts to familiarize themselves with the categories. Second, to be certain that they gathered accurately the set of teacher statements that were of interest for our purposes, each observer was accompanied by one of the experimenters familiar with the codes for a 30-minute session in a classroom. Later, agreement between observer and experimenter was assessed both for inclusion of remarks into the universe of socialization statements and for recording of basic context information necessary for more detailed coding (i.e., reactivity, quality of remark, and target). Reliability for recording the correct information was .92. Reliability for correctly coding *all* categories (domain, issue within domain, time, quality, target, child and teacher activity structures, salience, expectation, attribution, and sanction) subsequently ranged from .75 to .90 with an average of .85. Given that the verbatim records of teacher statements were available for checking, it was readily possible to ensure that this more detailed information was coded correctly after actual data gathering. First, one of the experimenters reviewed all statements recorded for the first three hours of classroom observation and checked all categorizations with observers individually. Weekly meetings were then held to spot check coding and discuss any problems. Spot checks of the coding against the verbatim teacher statements indicated that after three hours of data collection all coders had reached at least .85 accuracy.

Ten hours of statements made by teachers were collected in each classroom. Only statements made by the adult with primary responsibility for the classroom were recorded, eliminating remarks by student teachers, substitute teachers, or parents. Insofar as possible, statements were recorded verbatim, given that actual coding was done from the notes taken in class.

Observations were scattered throughout the school day. At least two hours of observations were done while the teacher conducted reading lessons or reading groups except in those rooms where reading instruction was not carried out in

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group fashion. The remaining hours included periods devoted to other subjects such as math as well as less academically oriented periods such as show-and-tell.

Managerial Effectiveness and Task Structure

Managerial effectiveness was not originally built into the design as a potential determinant of student role socialization. Instead, we turned to this literature for guidelines when some of the variables initially thought important proved to be relatively unimportant parts of teacher talk or unimportant determinants of either that talk or student thought, as is discussed later. As it emerged that managerial issues might be important, we were able to include a questionnaire for observers in the second year's data gathering so that managerial issues could be directly assessed. Here, however, we must rely on an *indicator* of such effectiveness rather than an explicit *measure*. There is always the possibility, therefore, that the indicator chosen is really "something else," and readers should assess relevant results accordingly.

Given that the central official task in the teacher role is to encourage scholarship, what we chose as an indicator of managerial effectiveness is what might be seen as the teacher's "work orientation": the proportion of socializing communication devoted to academic performance as opposed to procedural or social/moral issues. As a measure of managerial effectiveness, the danger of using such a variable is that high proportionate attention to academic performance could result either because the teacher has procedural issues under control and is able to do her job, *or* because she is simply ignoring procedural and social chaos and plodding onward with the lesson. Thus we examined observers' comments about the rooms as well as their transcripts, finding consistent evidence that the rooms high in proportionate attention to academic performance were also generally characterized by high student productivity and good behavior. This may provide further support for Brophy's conclusion, quoted earlier, that good managers tend to make good teachers because the requisite skills overlap; but in any case, it clearly refutes the notion that high proportionate attention to academic performance entails ignoring social chaos. Overall, then, a teacher's relative attention to academic performance, at least in these data, seems a reasonable indicator of managerial effectiveness.

Given that all clauses of teacher communication were coded for the domain addressed, obtaining a score for each teacher of attention to academic performance was simple. We merely calculated the percentage of all clauses coded as dealing with academic outcome. Although certain questions cannot legitimately be addressed using this variable—such as, for example, teachers' relative attention to social procedure, because it would have to be negatively correlated—most of the potentially relevant research questions can be addressed. Differences between teachers on attention to academic performance and correlates of these differences are presented later in the results section.

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In contrast to the question of managerial effectiveness, we had a number of possible measures of task structure. As noted in footnote one, extensive ethnographic records were available for 12 of the rooms; these were coded for task structure and typified into categories of low to high openness of task structure based on the teacher's degree of use of multitask teaching activities. This typification is highly related, however, to our measures of the child's activity structure and the teacher's activity structure, both of which were obtained for all clauses of teacher communication for all rooms.

Because the child's activity variable was more finely differentiated and reflected the organization of the class at a given time, we used that variable for constructing the task structure measure. We simply took all activities in which the children were doing the same thing at the same time, coding those as traditional, and all activities in which children were doing different things (essentially multitask structures, in terms of the relevant literature), coding those as open. Then, we derived a score for each teacher of "percent openness" by looking at the distribution of the resulting dichotomy across all clauses recorded. The resulting variable provides a continuous gradation of degree of openness of the actually observed task structure for all classrooms studied.

Student Thought

In order to assess how students react to norms the teacher tries to impose, children responded to pictures illustrating conformity and nonconformity to norms on each issue for each domain coded in the teacher statements. To facilitate presentation, issues were divided into "good" books and "bad" books, where the good books concerned doing deeds that one should do and omitting deeds that one should not do, and the bad books concerned the reverse. No more than ten issues were included in any one book, with three books containing 28 issues presented in one session for the good books and three books containing 30 issues presented in a single session for the bad books. The large number of issues was necessary because we wanted to ask about both sides of each norm (e.g., doing a bad deed would go into a bad book, while omitting it would go into a good book). The additional issues in the bad books included teasing and tattling, which were side issues not represented in the teacher codes and for which comparable mirror images were difficult to construct. Order of presentation of issues was randomized within one set of books and then kept the same for the second set. Which set was tested first was then alternated within grades, and booklet order was varied according to a Latin Square design to control for possible effects of order of presentation. A full list of the issues used will be presented in the results section below.

Two measures were included for each issue in order to tap both cognitive and affective responses to classroom norms. Children were asked to assess how bad (or good) each thing was to do and then asked to indicate "how they feel when

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they do" what was pictured. All children had first responded to a training task in which a very bad (good) and mildly bad (good) extra-classroom deed had been depicted and the interviewer had ascertained that they could differentiate the importance of issues. To assess the importance—degree of goodness or badness—of an action, fifth graders drew a line within preset boundaries of 250 millimeters. First graders, for whom such a task was deemed too difficult, moved a marker on a "magic line maker" where a red line was revealed when the marker was pushed. To indicate how they would feel when doing an action depicted, all children marked one of four faces that ranged from neutral to a large frown for bad acts and neutral to a large smile for good acts. Fifth graders were interviewed in groups, usually of five students at a time; first graders were interviewed individually. Since the fifth graders simply filled out booklets, there was no interference or sharing of answers between children.

Because different children might calibrate the scale for importance in different ways, we used a data transformation for the dependent variable. This transformation uses the lines as measures of *relative* importance on a child-by-child basis. Indices of importance—degree of goodness or badness—were constructed for each issue by assigning the value of 1.0 to the longest line drawn by each individual child and the value 0 to the shortest, with intermediate lengths transformed according to the formula (length - minimum length) / (maximum length - minimum length). For each issue, therefore, average importances reported across children can also theoretically range from 1.0 to 0, and results reported can be read essentially as proportions of the maximum range.[6]

RESULTS

Overall Flow of Teacher Talk

If the teacher is to transmit the student role, then the first and most basic question concerns what she says when communicating what we have characterized as socializing information: directives and feedback about role behaviors. How much is said? How proactive or reactive? How positive or negative? How informative is it? About what? We therefore turn first to a general account of socializing communication before exploring the effects of structural variables on that communication.

The overall flow of communication averaged 585 clauses per classroom, ranging from 270 to 1126 clauses. This communication was largely reactive, negative, and procedural in nature. Fully 78% of the clauses occurred after rather than before student behaviors. Evaluative tone, which could be positive, nega-

[6]Thanks are extended to our computer and statistical consultant, John Gray, for suggesting this transformation as the most appropriate for these data.

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tive, ambiguous, or not applicable (for "before" statements), was 49% negative to 28% positive. Salience of remarks, however, was low, indicating that the degree of affectivity displayed by the teacher was slight; fully 98.5% of all clauses were rated as of low salience. A majority of the overall communication was procedural, either academic (31%) or social (26%), with a smaller proportion devoted to academic performance issues (41%) and a miniscule proportion devoted to social moral concerns (2%).

Characteristics of communication varied dramatically between domains. Academic performance was heavily reactive (98%), academic procedure least reactive (53%), and the other domains intermediate (social procedure: 78%; social moral: 81%). This is predictable given that performance communication by definition is primarily after a behavior, while academic procedure communication tended to be linked to instructions about work. More interestingly, the evaluative tone also dramatically differed, with academic performance standing out as only 30% negative, in contrast to the more negative tone of academic procedure (49%), social procedure (76%), and social moral (81%) communications. This combination suggests in part the obvious point that reactivity per se should not necessarily be characterized as negative or bad, but may be an inevitable part of the domain in question.

From the viewpoint of attribution or social learning theories, the presence of clauses that communicated further socializing information—expectations, attributions, or sanctions—might be of equal importance in predicting effective transmission of the student role. For convenience in discussion, we will refer to these types of communication as *informatives*, although they in fact simply embed further information of a theoretically relevant nature. A small proportion of the role-relevant communication, only 14%, consisted of informatives. This ranged from a low of 5% to a high of 27% of all clauses recorded, yielding a total ranging from 22 to 126 informatives for 10 hours of observation. Particularly given that our universe of communication already excluded social talking and simple instruction, one message of these data is that potentially key informatives occur but rarely in a sea of other speech.

Informatives were dramatically more negative and procedurally-oriented than was the overall flow of socializing communication, although they were about equally reactive. An overwhelming 71% of informatives were negative, as opposed to 8% positive, in evaluative tone; some 79% occurred after rather than before student behaviors. Procedural concerns clearly dominated, with 37% of informatives devoted to academic procedure and 40% to social procedure, as opposed to 20% devoted to academic performance and 3% to the social/moral domain. Table 7.2 summarizes comparisons between overall communication and informatives.

Given that informatives were predominantly negative, reactive, and procedural, a further question concerns differences in quality of this information between domains. Table 7.3 presents comparisons between overall communica-

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tion and informatives by domain. It shows that, first, relatively *few* informatives are provided in the academic performance domain—hardly what one would see a priori as beneficial. Among informatives, academic performance is again the most reactive and academic procedure the least reactive domain. Somewhat heartening, academic performance also again stands out from the other domains in involving dramatically more positive feedback, although positive feedback is outweighed more than double by negative among informatives even in this domain.

Perhaps surprisingly, a single issue dominated the informatives for each domain. Over half of the miniscule quantity of social/moral informatives (57%) concerned respect for others, while over half of the social procedure informatives (51%) concerned talking; nearly half of academic procedure informatives concerned keeping on task (46%), and nearly half of academic performance informatives concerned language content (45%). The dominance of language content over other academic issues may well be a function of our care in sampling reading and writing periods. But the heavy single-issue emphasis in the two procedural domains—which themselves accounted for 77% of informatives—would appear to be clearly a "real" result, meaning that over one-third of the overall total of expectations, attributions, and sanctions transmitted simply concerned talking or keeping on task.

Further questions concern the distribution of informatives by types among domains, as well as their breakdown into the finer categorizations actually coded. Table 7.4 shows the overall distribution of informatives among all categories of expectations, attributions, and sanctions, as well as this same distribution for each domain. Given the large number of categories and the high variation in

TABLE 7.2
Characteristics of Overall Teacher Communication Versus Informatives

	Overall	*Informative*
Reactivity		
Before	22%	21%
After	78	79
Evaluative tone[a]		
Positive	28%	8%
Negative	49	71
Distribution		
Academic Outcome	41%	20%
Academic Procedure	31	37
Social Procedure	26	40
Social/Moral	2	3
N (clauses)	10,526	1416

[a]Ambiguous or not applicable (before) communication not presented.

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TABLE 7.3
Domain Differences in Reactivity and Quality of Overall Communication and Informatives

	Academic Performance	*Academic Procedure*	*Social Procedure*	*Social/ Moral*
Overall Communication				
Percent Informative[a]	10%	21%	24%	31%
Reactivity[b]				
Before	2%	47%	22%	15%
After	98	53	78	85
Evaluative tone[c]				
Positive	64%	4%	3%	6%
Negative	30	49	76	81
N(clauses)	4300	3299	2755	167
Informatives				
Reactivity[d]				
Before	8%	34%	16%	21%
After	92	66	84	79
Evaluative tone[e]				
Positive	29%	4%	2%	2%
Negative	62	63	82	81
N(clauses)	276	525	568	47

[a] χ^2 from table including informatives and all other communication = 1607, d.f. = 6, $p < .0001$.
[b] $\chi^2 = 2251$, d.f. = 3, $p < .0001$.
[c] Ambiguous or not applicable (before) communication not presented. Overall $\chi^2 = 6130$, d.f. = 9, $p < .0001$.
[d] $\chi^2 = 90$, d.f. = 3, $p < .0001$.
[e] Ambiguous or not applicable (before) communication not presented. Overall, $\chi^2 = 271$, d.f. = 9, $p < .0001$.

amount of information by domain, comparisons must be made with care. But a number of differences are instructive. The domain of academic performance shows heavy use of attributions, and these have a relatively positive cast.[7] In particular, negative ability is rarely communicated to students, there or in other domains of communication. The procedural domains show heavier reliance on

[7] An overall chi-square test for domain differences in kind of information (with subcategories collapsed) did show highly significant differences, with dramatic reliance on attributions in academic performance, and expectations and sanctions dominating the other domains, as would be expected from examining the more finely differentiated table.

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TABLE 7.4
Distribution of Expectations, Attributions, and Sanctions in Teacher Talk Overall and by Domain[a]

Information:	*Overall*	*Academic Performance*	*Academic Procedure*	*Social Procedure*	*Social Moral*
Expectations					
Rule	6%	2%	2%	7%	30%
Consequences to self	12	6	17	11	4
Consequences to group	2	0	2	1	0
Consequences to other	7	2	3	13	21
Consequences to teacher	4	2	2	6	0
Consequences to object	2	0	1	4	0
Circumstances	10	2	13	10	6
Authority	2	1	2	3	4
Attributions					
Positive effort	4	14	3	1	2
Negative effort	7	21	7	1	0
Positive ability	3	9	3	1	0
Negative ability	3	4	3	2	2
Unstable	1	2	2	0	0
Task	5	11	6	0	0
Mixed	4	13	2	1	0
Sanctions					
Reward	1	1	2	1	0
Promise	0	0	1	0	0
Punishment	6	7	3	9	11
Threat	15	3	16	20	13
Redirection	7	0	11	7	6
N (clauses)	1414	275	524	568	47

[a] χ^2 for domain differences = 685, d.f. = 57, $p < .0001$.

expectations, with a preponderance of intrinsic (consequences-oriented) communications. Socialization concerning social/moral issues presents possibly the bleakest picture: The exceedingly rare informatives in this area are essentially negative sanctions or extrinsic explanations in terms of rules. But sanctions in general, it is strikingly clear, *are* essentially negative in this data set.

The initial picture of teacher talk regarding the student role is thus mixed at best. It is reactive, negative, and procedural. Informatives—expectations, attributions, or sanctions—occur but rarely and are even more negative and procedural in emphasis than the overall flow of talk. Socialization concerning the core task of academic performance, although outweighed by procedural communication, does offer the most positive picture; but it is perhaps most honestly characterized as simply less negative than the other socialization that occurs.

Teacher talk may depend, however, on structural factors. The picture may be more or less bleak when one looks at teachers of differential managerial effectiveness or at classrooms with different degrees of openness of task structure.

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Further, features of the children that differ across or within classrooms may affect teacher talk; such talk may be affected by whether it is an older or younger, male or female, and working or middle class target who sits waiting to be socialized. Thus we now turn to an overview of these structural effects on teacher communication about the student role.

Teacher Talk: Managerial Effectiveness and Task Structure

Before summarizing these results we should emphasize that both managerial effectiveness and openness of task structure are correlational rather than causal variables with respect to teacher talk, although in somewhat different ways. As noted in the methods section, our indicator of managerial effectiveness was percentage of communication devoted to academic performance. Thus, as noted, certain comparisons, like distribution of remarks among domains, are ruled out. But it is also true that features that emerged as characteristic of the academic procedure domain are likely to correlate with "managerial effectiveness" because of the choice of indicator; we shall attempt to sort out in our discussion of results the extent to which such findings might actually be part of an overall package of effective management, given evidence from the previous literature. The degree of openness of task structure, in contrast, is defined independently of any of the other measures of interest. It presents a correlational problem only in the sense that a teacher both chooses to operate within a task structure and talks to students. It is thus possible that some (unmeasured) teacher characteristic causes both the selection of task structure and characteristics of teacher talk. We would agree with this argument, although we tend to believe that task structures, once set up, have causal effects in molding what the teacher says and how it is said. To partially sort out this latter correlation/causation question, we also examine differences in teacher talk during more differentiated and less differentiated instructional activity, for since all teachers in fact engaged in both open and traditional types of activity, this strategy effectively uses teachers as their own controls.

Aspects that characterize speech in the academic performance domain have already been summarized both for overall communication and for informatives above and in Table 7.3. Overall, such teacher talk was less negative, more reactive, and contained fewer informatives than that for other domains. When the variables are all transformed to percentages for individual teachers, and the n thus becomes 18, only one significant correlate of percent academic performance remains: negativity. Teachers' percentage of communication devoted to academic performance and the percentage negativity of their talk correlated a substantial $-.77$, highly significant even with teacher as the unit of analysis.

For the measure of openness, we first characterized the various categories of the child activity code as either differentiated, multi-task or undifferentiated, single-task, with the former considered as open and the latter as traditional. It is

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then possible both to look at the level of clauses for relationships with other variables and to characterize teachers overall and seek relationships at that level. At the level of clauses, several significant relationships emerged. When the teacher talk was occurring in an open activity structure, it was significantly less negative (43% versus 53% for traditional); more likely to involve academic performance and less likely to involve social procedure (by 11% in each case); and contained fewer informatives (14% to 21%). At the level of teachers' overall percentages, no relationships were significant. For example, although speech occurring in an open activity structure tended to involve more academic performance, it was not the case that teachers who had more open classrooms had any significant tendency to emphasize academic performances. Finally, teachers' degree of openness was checked for relationships with grade or social class. Although no relationship was found with grade, there was a significant difference between working and middle class in openness. It is not surprising that working class schools were significantly less open, given that, as noted in the methods section, officially open rooms had been abandoned in those schools prior to the study.

Teacher Talk: Differences in Target

We have seen thus far certain differences in teacher communication as a function of teacher-carried structural variables, especially with respect to the negativity of teacher talk. The theoretical section noted, however, that we might expect differences particularly between grade levels in the type and quality of communication, but also possibly between remarks addressed to boys and girls and between communication to working class and middle-class students.

Grade Differences. Surprising similarity between first and fifth grades was observed, especially given that teachers theoretically should engage in somewhat different role socialization for optimal results. Overall communication to the two grade levels was about equally reactive. In the first grade positive communication did form a significantly higher proportion of talk, by 62% to 50%, as would be expected from the assumption that first-grade teachers are trying to instill norms rather than enforce already-instilled norms. Teachers differed across grades, however, in what was being instilled or talked about, with emphasis in the first grade on academic performance and social procedures and in the fifth grade on academic procedure. Yet these differences, while statistically significant, were small—suggesting that overall emphasis on procedural issues characterizes both grade levels equally well.

Although informatives were found in roughly equal proportions across grades, and were again about equally reactive, they differed both in again being more positive in the first grade and in the *kind* of communication being made. First-grade teachers provided proportionately fewer expectations than fifth-grade

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teachers (39% to 48% of informatives). When expectations were broken down into extrinsic versus intrinsic (consequences-oriented) types, first-grade teachers were also significantly less likely to provide intrinsic expectation information. These differences suggest that the first-grade teacher may presume less about what her students can or will understand of their action, focusing more on telling and doing than on explaining, relative to her fifth-grade counterpart. Overall, however, grade had a generally slight impact on the flow of communication or of informatives within that communication.

Sex of Student. A much more dramatic socialization difference emerged within classrooms than across classrooms of different grades. Very simply, there was a sizeable sex difference in distribution of overall communication: it was substantially more likely to be made to boys (39%) than to girls (29%). The remainder of communication was addressed to small groups or to the whole group.[8] This imbalance is even more pronounced in looking at informatives only, for 39% of these were addressed to boys as opposed to 21% to girls. Both differences are highly significant.

One question that arises in considering such lopsided communication is the problem that the target of communication may be such for a positive reason (e.g., the teacher likes boys better) or a negative reason (e.g., the teacher finds boys to be behavior problems). Thus we examined overall communication received by boys, girls, small groups, and whole groups to explore its quality and the distribution of concerns addressed. Results, presented in Table 7.5, indicate that reactive communication was addressed heavily to individuals, although about equally to boys and girls. There was a slight but not overwhelming tendency for boys to receive proportionately more negative feedback than girls, a difference that may be explicable in terms of the concerns addressed to the two sexes. Girls received an appreciably higher proportion of their communication regarding academic performance, while communication to boys involved more of both procedural areas. As we have already seen, academic performance communication tends to be more positive than that about procedural concerns.

The picture of informatives for boys and girls resembled that for overall remarks. Informatives were again almost identically reactive, but more similar in their negativity than was true of overall communication: 81% of informatives to boys were negative in comparison to 78% to girls. Distribution of these informatives among domains was somewhat more skewed, with girls receiving an even higher relative proportion of their informatives about academic performance (37%) than was true for boys (22%). Given these differences in concerns addressed to the two sexes, it is not surprising that only 17% of the negative

[8] Very small amounts of communication were addressed to small groups made up entirely of girls or boys. Because these mirrored the results for boys and girls individually, they were combined with those for individuals in these analyses.

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TABLE 7.5
Characteristics of Overall Communication to Boys, Girls, and Groups of Students

	Boys	*Girls*	*Small Group*	*Whole Class*
Reactivity[a]				
Before	11%	10%	51%	46%
After	89	90	49	54
Quality of Feedback[b]				
Positive	33%	41%	15%	6%
Negative	54	45	34	49
Distribution[c]				
Academic Performance	49%	61%	17%	7%
Academic Procedure	27	23	48	44
Social Procedure	22	15	35	47
Social/Moral	2	2	1	2

[a] $\chi^2 = 1851$, d.f. = 3, $p < .0001$.

[b] Ambiguous or not applicable (before) communication not presented. Overall $\chi^2 = 2247$, d.f. = 9, $p < .0001$.

[c] $\chi^2 = 1863$, d.f. = 9, $p < .0001$.

informatives addressed to boys concerned academic performance, in contrast to 33% of the negative informatives to girls. The *kind* of information provided also differed in congruent ways. Comparing the overall distribution of informatives among expectations, attributions, and sanctions, girls proved to receive proportionately more attributions among their informatives (40% versus 28% for boys). This is also not surprising given that attributions were found earlier to be concentrated more heavily in the academic performance domain.

Despite some differences between the sexes in the nature and distribution of teacher talk received, the overall message of these data is similar to that from our pilot investigation (Blumenfeld et al., 1977, 1979). The striking difference in teacher handling of girls versus boys concerns the amount of attention paid to them in the first place. Within that background fact, there are relatively more subtle tendencies for girls to receive disproportionately more academic performance communication, and quite slight evidence of more positive communication to girls. Teachers do *not* appear to be attending to boys because they are disruptors—although of course they might be attending to boys so as to prevent them from *becoming* disruptors. In any case, although a simple explanation does not emerge from these data, the simple fact remains: the sheer amount of both overall communication and informatives addressed to boys substantially outweigh those to girls.

Social Class. In contrast to those for grade or sex, the effects of social class on teacher talk can be readily summarized: there were almost none. Teachers in working- versus middle-class schools did not differ significantly in the reactivity

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or negativity of overall communication; in its distribution among domains; in the number of informatives provided; or in their reactivity and negativity. They addressed essentially the same issues within domains and gave the same kinds of attributions and expectation information. The sole difference of any import found is a tendency toward more sanctioning—which essentially means more punishing and threatening—in the working-class schools. Some 34% of informatives were sanctions for the working class, while the percentage for middle-class schools was only 24%. Although managerial effectiveness was uncorrelated with social class, recall that openness was substantially related to class. Thus we examined the relationship between class and distribution of informatives controlling for whether the teacher talk occurred in an open or traditional structure. The class difference proved to hold only during traditional communication (which occurred to some extent in all rooms). Thus with the caveat that it is limited to traditional communication, this sanctioning difference would appear to be a "real" social class difference. But the overall similarity in teacher communication to working- and middle-class students is far more impressive than this one rather slender difference.

Children's Thought about the Student Role

The student role as communicated in teacher talk is one of conformity to procedural demands, enforced through largely reactive and negative means, and rarely accompanied by further informatives that might guide internalization of classroom norms. Structural differences in this communication were relatively few, with the effects of our indicator of managerial effectiveness and the differences in attention paid to boys versus girls standing out in a general picture of cross- and within-classroom similarity. The issues then remaining are, first, what students think about the relative importance of the domains of classroom life or issues within them; second, how they would feel if they met or failed to meet expectations; third, how different the children's responses are depending on their grade, sex, or social class; and, crucially, the potential impact of differences in teacher talk, managerial effectiveness, or task structure on children's thought about the student role.

Table 7.6 presents average importance and feelings ratings summaries for each issue as well as for each domain overall, separately for good and bad books. Grade differences, also presented here for convenience, are discussed later. In examining results or in particular in comparing importance and feelings data, recall that the measure of importance is a transformation of the continuous line data that ranges between 0 and 1.0; feelings data represent assignment of numbers, ranging from 1 to 4, to the neutral face through large smile (or large frown) stimuli.

Certain general patterns appear across domains, as well as, predictably, differences among domains. A first general pattern concerns how students react to meeting an expectation ("good books") versus failing to meet one ("bad

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TABLE 7.6
Student Thought about Classroom Norms by Domain:
Importance (lines) and Feelings (faces) for Each Norm

Issue	*Importance*				*Feelings*			
	Overall	*First Grade*	*Fifth Grade*	*Significance level*	*Overall*	*First Grade*	*Fifth Grade*	*Significance level*
A. Academic Performance								
OVERALL	.66	.74	.59	d	3.23	3.45	3.01	d
Math Content	.74	.80	.70	c	3.50	3.58	3.42	a
Language Content	.70	.75	.65	c	3.30	3.47	3.14	d
Other Content	.63	.70	.57	d	3.26	3.47	3.08	d
Language Format	.57	.68	.47	d	2.90	3.27	2.57	d
Math Format	.66	.76	.58	d	3.11	3.44	2.81	d
OVERALL	.46	.57	.37	d	2.74	3.12	2.39	d
Math Content	.54	.61	.48	d	3.07	3.27	2.90	c
Language Content	.55	.62	.49	c	2.92	3.14	2.72	d
Other Content	.40	.52	.29	d	2.64	3.12	2.21	d
Language Format	.34	.48	.21	d	2.29	2.80	1.82	d
Math Format	.52	.64	.40	d	2.76	3.25	2.31	d
B. Academic Procedure								
OVERALL	.68	.76	.60	d	3.09	3.43	2.79	d
On-Task	.68	.78	.59	d	3.06	3.47	2.69	d
Assistance	.65	.76	.55	d	3.01	3.38	2.68	d
Persistence	.75	.82	.68	d	3.78	3.48	2.92	d
Readiness	.64	.69	.59	b	3.07	3.42	2.76	d
Routine	.65	.75	.56	d	2.96	3.37	2.58	d
Completion	.70	.76	.64	c	3.27	3.47	3.08	d
OVERALL	.59	.68	.51	d	2.91	3.23	2.63	d
On-Task	.64	.75	.53	d	2.99	3.36	2.66	d
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

outine	.65	.75	.56	d	2.96	3.37	2.58	d
ompletion	.70	.76	.64	c	3.27	3.47	3.08	d

OVERALL	.59	.68	.51	d	2.91	3.23	2.63	d
On-Task	.64	.75	.53	d	2.99	3.36	2.66	d
Assistance	.57	.67	.47	d	2.85	3.23	2.49	d
Persistence	.68	.76	.61	d	3.07	3.31	2.85	d
Readiness	.51	.56	.47	b	2.72	2.91	2.55	c
Routine	.62	.71	.53	d	2.99	3.36	2.65	d
Completion	.53	.63	.44	d	2.87	3.22	2.55	d
Social Procedure								
OVERALL	.62	.73	.53	d	2.93	3.36	2.55	d
Materials	.69	.78	.60	d	3.12	3.50	2.78	d
Place	.55	.68	.44	d	2.79	3.27	2.35	d
Lining Up	.57	.69	.45	d	2.82	3.30	2.39	d
General	.59	.68	.50	d	2.81	3.25	2.41	d
Turn Taking	.64	.73	.55	d	2.97	3.34	2.63	d
Role	.64	.71	.57	d	3.00	3.42	2.63	d
Late	.63	.73	.54	d	2.93	3.38	2.53	d
Cleaning Up	.70	.81	.60	d	3.06	3.47	2.71	d
Noise	.62	.72	.53	d	2.89	3.32	2.50	d
OVERALL	.58	.69	.47	d	2.82	3.21	2.47	d
Materials	.64	.77	.52	d	3.03	3.44	2.65	d
Place	.43	.57	.31	d	2.42	2.88	2.00	d
Lining Up	.56	.70	.44	d	2.74	3.26	2.25	d
General	.67	.77	.58	d	2.99	3.35	2.66	d
Turn Taking	.61	.71	.51	d	2.89	3.26	2.56	d
Role	.63	.71	.56	d	3.04	3.25	2.85	d
Late	.39	.48	.31	d	2.44	2.80	2.11	d
Cleaning Up	.66	.79	.53	d	3.03	3.40	2.69	d
Noise	.60	.75	.48	d	2.84	3.25	2.47	d

(continued)

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TABLE 7.6 (*Continued*)

Academic Performance Issue	*Importance*				*Feelings*			
	Overall	*First Grade*	*Fifth Grade*	*Significance level*	*Overall*	*First Grade*	*Fifth Grade*	*Significance level*
Social/Moral								
VERALL	.73	.81	.66	d	3.21	3.50	2.95	d
omforting	.78	.84	.72	d	3.33	3.55	3.14	d
ggression	.70	.83	.59	d	3.13	3.45	2.84	d
ing	.77	.83	.71	d	3.18	3.51	2.87	d
aring	.70	.76	.65	c	3.21	3.45	3.00	d
clude Others	.68	.77	.60	d	3.19	3.56	2.84	d
aying Fair	.65	.75	.57	d	3.09	3.47	2.74	d
leating	.76	.82	.70	c	3.24	3.52	2.99	d
caling	.79	.83	.75	b	3.33	3.50	3.18	c
VERALL	.69	.76	.63	d	3.14	3.40	2.91	d
omforting	.65	.74	.56	d	3.12	3.47	2.80	d
ggression	.78	.86	.71	d	3.30	3.57	3.05	d
ying	.84	.89	.80	c	3.55	3.68	3.42	c
aring	.57	.69	.46	d	2.91	3.39	2.47	d
clude Others	.63	.73	.54	d	2.96	3.24	2.72	d
aying Fair	.54	.60	.49	b	2.84	3.10	2.60	d
eating	.83	.84	.82	n.s.	3.45	3.51	3.41	n.s.
caling	.89	.89	.90	n.s.	3.66	3.68	3.64	n.s.
ttling	.55	.64	.46	d	2.72	3.03	2.44	d
easing	.63	.74	.53	d	2.93	3.32	2.56	d

test $p \leq .05$
$< .01$
$< .001$
$< .0001$

books [illegible] that child[illegible] In addition meeting [illegible] pattern [illegible] commun[illegible] tion, chil[illegible] earlier th[illegible]

Relati[illegible] emphasis one, at le[illegible] measures other issue[illegible] fruitfully [illegible] learned in[illegible] into the [illegible]

Resp[illegible] of more[illegible] issues wi[illegible] "then sh[illegible] and play[illegible] as aggres[illegible] For the [illegible] good to [illegible] represe[illegible] could b[illegible] tual an[illegible] possibl[illegible] any cas[illegible] ratings [illegible] most cl[illegible] than on[illegible] finds [illegible]

The[illegible] regard[illegible] emphas[illegible] book[illegible] that cl[illegible] this de[illegible]

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*B[illegible]

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books"). Overall averages for good versus bad books show, across all domains, that children rate it to be better to meet an expectation than it is bad to fail at one. In addition, they are consistent in rating that they would feel more good in meeting a role expectation than they would feel bad in failing to meet one. This pattern is somewhat surprising, given that such a high proportion of teacher communication concerns essentially the "bad books" version of issues; in addition, children are supposed to absorb learning about doing and not doing "bads" earlier than they do about "goods" (Keasey, 1978).

Relative importance of the domains shows that the domain receiving least emphasis in the classroom—that of social/moral issues—is the most important one, at least by the criteria of how children responded to these lines and faces measures. This both again illustrates children's ability to distinguish moral from other issues (e.g., Turiel, 1978) and suggests that moral concerns might be most fruitfully considered as outside the student role per se. They are something that is learned in the child's daily life, rather than in the classroom itself, and are carried into the classroom as into any other setting the child encounters.

Responses within social moral issues do suggest clues to how different types of norms may be learned. In this domain there are clear distinctions between issues where children are taught "thou shalts" and issues where they are taught "thou shalt nots." Norms like comforting another, sharing, including others, and playing fairly call for the *commission* of behavior. Norms about such issues as aggression, lying, and cheating, in contrast, call for the *omission* of behavior. For the commission norms here, children consistently reported that it was more good to do the act than it was bad to omit it; for the omission norms, they reported that it was more bad to do the act than it was good to omit it. There could be a variety of reasons for this pattern of differences, including the perceptual and conceptual simplicity of human action (versus inaction), as well as possibly the reinforcement patterns employed for the different types of norms. In any case, the overall result that "good books" tended to receive generally higher ratings than "bad books", discussed earlier, may be a function of the fact that most classroom norms are either clearly commission norms or ambiguous rather than omission norms.[9] The kind of norm asked about may determine what one finds concerning children's comprehension or their assessments.

The three domains specifically related to classroom life look very similar with regard to how good it is to meet an expectation. Teachers' relative lack of emphasis on academic performance may be reflected in the results for the bad books that it was rated *least* bad not to fulfill academic performance norms and that children indicated they would feel least bad about not doing so. Norms in this domain are also clearly and uniformly commission norms, however, while

[9] By ambiguous norms we mean ones in which the socialization might readily be phrased in terms of either commission or omission (e.g., "don't be late" versus "be on time"; "be neat" versus "don't be messy").

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some norms in the two procedural domains are ambiguous or omission norms. Thus it is not entirely clear whether to attribute such results to the domain of activity or to the type of norm involved.

Among the procedural issues, one essentially "moral" norm stands out: persistence, trying to do one's academic work. Weiner (1979) has suggested that effort is seen by children as a moral imperative. It is clear that children here perceived persistence as the best of the academic or social procedural activities when fulfilled, and failure to persist as the worst violation; their feelings data were congruent with these important ratings. These patterns suggest that Weiner's argument is correct.

Group Differences. The one truly overwhelming set of group differences is presented in Table 7.6: the consistent difference between first and fifth graders. For every norm except cheating and stealing, first graders rated the actions as more extremely good or bad and indicated that they would feel better or worse, respectively, than was true of fifth graders. Grade differences for importance might possibly be attributed to use of a different measuring instrument for first and fifth graders, as described in the methods section above. But the congruence of the reactions for feelings suggests that first graders were simply reacting with greater conformity to any and all norms. This pattern is consistent with our cognitive development-based expectation that responses of first graders would be less discriminating and more global.

Many fewer differences emerged between boys and girls and between working- and middle-class students, and in both cases they tended to involve ratings of feelings rather than importance. For both of these variables, tests were made using regressions with grade controlled by entering it first hierarchically; the interaction of each variable with grade was also entered and is discussed where significant. Tables therefore report partial correlations rather than means for both sex and social class. Because there are multiple nonindependent statistical tests made for such data, we adopted the decision rule that issues only be examined individually when the overall summary variable for the domain showed a significant group difference. (This rule was obviously unnecessary for grade differences, where almost all tests were highly significant.) Table 7.7 shows the results that emerge for sex differences using this selection criterion.

The consistent patterns of sex differences emerge in response to the bad books only, and involve feelings only, in the academic procedure, social procedure, and social/moral domains. Results are quite easy to summarize: Girls always reported that they would feel worse about violating the norm. The other dozen-odd scattered significant effects, for lines or for faces in the good books, might not be ones that could be individually trusted; but their pattern was also consistent with that found for feelings, in that girls always reported that it was better to fulfill an expectation and that they would feel better doing so, or worse to fail an expectation and (as shown) that they would feel worse. Thus sex differences are simply sharpest with regard to feeling bad about norm violations.

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TABLE 7.7
Partial Correlations for Significant Sex Differences in Feelings Ratings

	Domain and Issue	*Partial r's*	*Significance Level*
Bad Books	Academic Procedure		
	Overall	.14	.01
	On Task	.16	.002
	Routine	.11	.04
Bad Books	Social Procedure		
	Overall	.15	.005
	Lining Up	.14	.009
	General Social Procedure	.12	.03
	Late	.14	.01
	Cleaning Up	.12	.03
	Noise	.15	.007
Bad Books	Social Moral		
	Overall	.21	.0001
	Comforting	.14	.01
	Aggression	.15	.007
	Lying	.16	.004
	Sharing	.15	.005
	Tattling	.12	.03
	Teasing	.14	.008

The pattern of sex differences bears no direct relationship to the differential treatment the sexes received from the teacher. Girls reported greater conformity to the norms, despite receiving much less socializing attention than that received by boys. Girls were also most different from boys in the social/moral area, at least as indexed by number of significant differences found, and that area barely appears in classroom life. They were least different in the area of academic performance, the domain where teachers target the highest proportion of effort at girls. In general, evidence from student thought about the role supports a relatively "sugar and spice" picture of girls—certainly more so than is true of the teacher talk data, and in ways not particularly consistent with it.

Surprisingly, there were more significant differences between working and middle class students than between the sexes. These were also primarily concentrated in the feelings ratings, as Table 7.8 shows, but did involve importance ratings for both good and bad books in the academic performance realm. In contrast, for feelings ratings there were significant class differences in six of the eight possible areas, everywhere *except* in the good books for academic performance and procedure. Results can be readily summarized, as they were consistent across all tests: Working-class children always indicated it was better to meet a normative expectation and that they would feel better doing so, or that it was worse to fail an expectation and that they would feel worse doing so. Thus

TABLE 7.8
Partial Correlations for Significant Social Class Differences in Importance or Feelings Ratings

		Importance		*Feelings*	
	Domain and Issue	*Partial r*	*Significance*	*Partial r*	*Significance*
Good Books	Academic Performance				
	Overall	.12	.02		n.s.
	Language Content	.12	.03		
	Other Content	.18	.0006		
Bad Books	Academic Performance				
	Overall	.20	.0003	.20	.0002
	Other Content	.24	<.0001	.20	.0002
	Language Format	.11	.05	.15	.007
	Math Format	.14	.01	.19	.0005
Bad Books	Academic Procedure				
	Overall		n.s.	.17	.002
	On Task			.14	.01
	Assistance			.12	.02
	Routine			.19	.0006

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Good Books	Social Procedure				
	Overall		n.s.	.11	.05

Books	Academic Procedure			
	Overall	n.s.	.17	.003
	On Task		.14	.01
	Assistance		.12	.02
	Routine		.19	.0006
od Books	Social Procedure			
	Overall	n.s.	.11	.05
Books	Social Procedure			
	Overall	n.s.	.20	.0002
	Materials		.11	.05
	Place		.15	.005
	Lining Up		.18	.001
	Turn Taking		.15	.007
	Cleaning Up		.16	.003
	Noise		.16	.003
od Books	Social/Moral			
	Overall	n.s.	.12	.03
	Aggression		.24	< .0001
	Including Others		.11	.05
	Playing Fair		.12	.03
Books	Social/Moral			
	Overall	n.s.	.11	.04
	Sharing		.14	.008

despite little if any evidence of differential socialization by teachers, working-class children—even more so than girls overall—exhibited greater conformity to the norms involved in the student role.

A couple of interactions between social class and grade level did emerge. For the social procedure bad books, the working class children gave higher importance ratings in the first grade, while in fifth grade the two social classes were essentially equal. For the social/moral bad books, in the first grade working class children gave higher importance ratings, whereas in the fifth grade, middle-class children did so by a very similar margin. These patterns give some indication of reduction with age in working class conformity to the norms in question, but do not involve the feelings ratings where most of the class differences lie.

Effects of Teacher Talk on Student Thought

Thus far we have seen a series of differences involving children's judgments of the importance of classroom norms and their feelings about them, differences that bear but little relationship to any patterns uncovered in teacher talk itself. One natural question, then, is whether any aspects of teacher communication do affect children's views of the student role. Given the theoretical foundations in social learning and attribution theories, a number of possible candidates for appropriate "aspects" emerge. The reactivity of the communication is not particularly appropriate, given, as we have seen, that it can be simply a part of a classroom activity—like feedback about academic performance—rather than really serving as an indicator that the teacher is failing to shape behaviors. The negativity of communication is a much more plausible candidate, but given its correlation with the teacher's emphasis on academic performance, it is more reasonable to consider negativity as itself an effect of that structural variable.[10] We are then left with aspects of the informatives provided by teachers as possible determinants of children's thought about the student role. It is to these that we then look for teacher effects.

Information per se would be a category so broad as to be useless, for results showed that informatives of different types were distributed across the domains of classroom life in very different patterns and were also of differential negativity. Thus we chose to look at three different indices for informatives: the teacher's percentage of attributions provided in the academic performance domain, for that was where attributions were concentrated; and the teacher's percentage of expectation and sanction information in each of the academic procedure and social procedure domains, for those domains were where expectations and sanctions were chiefly found. In addition to controlling for domains in-

[10]It appears more plausible that the domain or topic determines the affective tone than the reverse. Thus, given their high intercorrelation, we chose to use the more structural (and probably causal) variable of the two.

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volved, this division also separates a relatively positive category (attributions) from the more generally negative expectation and sanctioning information.

Each of the measures of perceived importance or feelings was regressed on these information measures separately, using hierarchical regressions in which grade was entered first, then the information measure, and finally the interaction between the two. Again the decision rule was employed to look at specific issues only when a variable had an effect on a summary variable (such as "good books" responses for academic performance). Table 7.9 presents the results of these regressions for all three variables for the importance data only, given that there were generally many fewer effects on children's feelings ratings. Where there were significant relationships to feelings, these are discussed later in text.

As Table 7.9 reveals, the effects of the teacher's percentage of attributions in academic performance were quite specific to academic areas, and within those, to judgments of the good books, or meeting of normative expectations. There was an overall positive relationship for the academic performance domain itself, tempered by an interaction between percentage of attributions and grade; examination of that interaction revealed that there was no impact of attribution percentage in the first grade, but only in the fifth grade. In the good books for the academic procedure domain, only an interaction with grade emerged. Examination showed that it was similar to the previous interaction, in that there was a negligible negative effect of attribution percentage in the first grade and a substantial positive one in the fifth grade.

The most dramatic news in these analyses of teacher information, obvious from Table 7.9, concerns the difference between the impacts of expectations and sanctions from the two procedural domains. Although we have seen that the realm of academic procedure is a relatively negative one, and there is no reason to believe that the expectations and sanctions being tapped by the present variable differ from those in the social procedure domain in this respect, they have opposite effects on children's ratings of importance. Expectations and sanctions in the academic procedure domain, as a percentage of overall communication in that domain, had simple *positive* relationships to children's importance ratings for both academic performance and academic procedure. The chief difference from the pattern for attributions is that the expectations/sanctions variable affected ratings of the bad books, or failures to meet normative expectations, rather than the good books. In addition, there was also a significant positive relationship to ratings of the faces, or feelings data, for the academic procedure bad books. Attributions, in contrast, had no relationship whatsoever to feelings ratings.

Percentage of expectations and sanctions in the social procedure domain, in contrast, had quite diffuse effects on children's ratings across all domains. For academic performance, both good and bad books, there was a negative effect of teacher's percentage of social procedure expectations/sanctions on children's ratings. In the academic procedure realm, a similar main effect appeared for good

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TABLE 7.9
Partial Correlations for Significant Main Effects of Teacher Talk Variables on Children's Importance Ratings

	A. Domain and Issue	Percent Academic Performance Attributions	Significance Level
Good Books	Academic Performance		
	Overall	.12	.02
	Math Content	.16	.002
	Math Format	.11	.05

	B. Domain and Issue	Percent Academic Procedure Expectations/ Sanctions	Significance Level
Bad Books	Academic Performance		
	Overall	.15	.005
	Other Content	.18	.002
	Language Format	.12	.03
Bad Books	Academic Procedure		
	Overall	.12	.03
	On Task	.11	.04
	Assistance	.13	.02

	C. Domain and Issue	Percent Social Procedure Expectations/ Sanctions	Significance Level
Good Books	Academic Performance		
	Overall	-.20	.0002
	Math Content	-.14	.008
	Language Content	-.12	.02
	Other Content	-.15	.006
	Language Format	-.18	.001
	Math Format	-.15	.005
Bad Books	Academic Performance		
	Overall	-.16	.003
	Math Content	-.12	.02
	Language Format	-.12	.03
Good Books	Academic Procedure		
	Overall	-.14	.009
	On Task	-.15	.005
	Assistance	-.12	.03
	Completion	-.12	.02
Good Books	Social Procedure		
	Overall	-.18	.001
	Materials	-.12	.02
	Place	-.19	.0006
	Lining Up	-.13	.01
	General Social Procedure	-.24	< .0001
	Role	-.11	.05

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books, plus an interaction with grade; similarly to the previous interactions, this now indicated that there was a bigger negative relationship in the fifth grade than in the first. In social procedure itself there were again relationships with the good books, both a negative main effect of expectation/sanction percentage and an interaction with grade. The interaction again involved a larger negative relationship in the fifth grade than in the first. Results for the social/moral domain were the only ones that differed from the general pattern at all, in that an interaction with grade was the only general effect in the importance data; that interaction showed no effect of social procedure expectations/sanctions in the first grade, and a negative effect in the fifth. Further, the only relationships to feelings ratings appeared in this area for the bad books—and involved a different interaction, with a small negative relationship in first grade and no relationship in fifth grade. Given that this was the only link of this variable to feelings ratings and that the pattern differed from that of all the other interactions—which each showed larger negative effects in the fifth grade—the results should probably be discounted. Even including it in the overall pattern, that pattern clearly involves a negative impact of teachers' use of expectations or sanctions in the social procedure domain: The more those were used, the lower the children's importance ratings of a whole series of norms across the full range of norms tapped. Further, this relationship was generally stronger, and sometimes appeared only among fifth graders.

Overall, then, teachers' use of attributions in the academic performance domain had a positive impact on children's ratings of academically-related norms. This is reasonable given that such attributions are both informative per se and, as we have seen, relatively positive in tone. Surprisingly, use of expectations and sactions in the academic and social procedure realms had divergent effects on children's ratings, with academic procedure expectations/sanctions relating positively to ratings in the two academic domains and social procedure expectations/sanctions having diffuse negative effects on ratings. In general, however, all three teacher communication variables affected importance rather than feelings ratings, in contrast to the effects of sex or social class on judgments. It would appear that the more cognitive measure was more susceptible to teacher influence, whereas the more affective measure was more closely linked to differences children bring to the classroom. Some speculation about reasons for divergent effects among the teacher variables is made in the conclusions section.

Effects of Managerial Effectiveness and Task Structure on Student Thought

Either our indicator of managerial effectiveness or the openness of task structure might also affect children's thought about the student role, both because these indicators had some relationship to teacher talk and because they might reflect aspects of classroom life not necessarily captured in our teacher talk measures

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themselves. Simple direct effects of either variable were assessed in separate regressions where grade and classroom social class composition were entered first hierarchically; interactions of each with these control variables were also entered and are discussed in the text where significant. Interactions between academic performance as a percentage of a teacher's overall communication and percent openness were assessed in an equation in which grade was entered first, followed hierarchically by percentage academic performance and percent open, followed by all interaction terms. These interactions appear in Table 7.10 below, along with summaries of each set of main effects.

In a pattern resembling that for the teacher talk variables, both of these structural variables had effects on importance judgments only. The managerial effectiveness indicator had a significant positive effect on all four sets of "good books" ratings, but no effect on "bad books" ratings. For the social/moral good importance ratings there was also a small but significant three-way interaction with grade and social class such that in the first grade, there was an effect of percent academic performance for working class children only; in the fifth grade there was a positive relationship for both social classes. The only effects of percent academic performance on the feelings ratings appeared in interaction with social class for the academic procedure good books and the social procedure bad books. In the case of academic procedure, the social classes showed no differences in first grade, but in the fifth grade the working-class children showed a negative effect of percent academic performance; the middle-class children, a positive effect. For social procedure, at both grade levels the working-class children showed a negative effect of percent academic performance and the middle-class children a positive effect.

Main effects of the percentage of teacher talk occurring in open structures were even more specific than effects of percent academic performance. There were no effects whatsoever on the feelings ratings, and effects on only three groups of importance ratings: those for the academic performance good and bad books and for social procedure good books. The most interesting feature of the results is their negative sign, however, for the greater the teacher's degree of openness the *lower* the importance ratings given to the norms shown in Table 7.10.

Interactions are what make the results for percent openness truly interesting, however. The only interaction with a structural variable was one with social class for the academic performance bad books; it indicated that in the middle-class schools, openness had a positive effect in first grade and a negative effect in the fifth; in the working-class schools, the openness effect was uniformly negative. The key feature, shown in Table 7.10, was the interactions with percent academic performance (typically also accompanied by three-way interactions with grade). When graphed these showed that, in general, when percent academic performance was *low*, the effect of openness on children's ratings was negative; when percent academic performance was *high*, the relationship reversed and the effect of openness was positive. This flip-flop pattern appeared

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TABLE 7.10

Partial Correlations for Main Effects of Percentage Academic Performance, Percentage Openness, and Their Interaction[a]

	Domain and Issue	Percent Academic Performance	Percent Open	Academic Performance X Open
Good Books	Academic Performance			
	Overall	.13	-.15	.19
	Math Content	n.s.	-.18	.16
	Language Content	.13	n.s.	.15
	Language Format	.12	-.11	.13
	Math Format	n.s.	n.s.	.19
Bad Books	Academic Performance			
	Overall	n.s.	-.14	n.s.
	Language Content		-.14	
	Language Format		-.15	
Good Books	Academic Procedure			
	Overall	.20	n.s.	.16
	On Task	n.s.		.19
	Assistance	.12		.13
	Persistence	.18		n.s.
	Readiness	.15		n.s.
	Routine	.22		n.s.
	Completion	.11		.14
Good Books	Social Procedure			
	Overall	.15	-.12	.13
	Materials	.12	n.s.	n.s.
	Place	n.s.	-.19	.12
	Living Up	n.s.	-.12	n.s.
	General Social Procedure	n.s.	-.17	n.s.
	Turn Taking	.12	n.s.	.12
	Role	.14	n.s.	n.s.
	Late	.20	n.s.	.11
	Cleaning Up	.11	n.s.	n.s.
	Noise	.17	n.s.	n.s.
Good Books	Social/Moral			
	Overall	.17	n.s.	.16
	Comforting	.15		n.s.
	Aggression	n.s.		.15
	Lying	n.s.		.11
	Sharing	.11		.13
	Including Others	.15		n.s.
	Playing Fair	n.s.		.13
	Cheating	.13		n.s.
	Stealing	.17		.13

[a] Partials for percent academic performance and percent open are reported from equations in which grade and social class were entered first hierarchically as controls. To simplify the number of terms involved, the partials for the interaction were obtained from an equation in which just grade, the two independent variables, and their interactions were entered hierarchically.

more strongly, or only, in the fifth grade, yielding three-way interactions. One way of making sense of this pattern is to suggest that when a teacher is not an effective manager (i.e., when percent academic performance is low), greater openness may simply mean greater chaos, such that it has a negative impact on children's views of classroom life; when the teacher is an effective manager, greater openness may accomplish some of the benefits its proponents have suggested. Thus effects of task structure need to be considered in the context of the teacher's managerial effectiveness. The fact that this interactive effect for openness appeared only in the fifth grades does, however, lend support to recent cautionary notes about open structures in the very early grades (e.g., Brophy, 1979), in that openness in the first grade simply had negative or at best nil effects on children's ratings.

CONCLUSIONS

As a socializing institution, the school is the arena from which the larger society expects scholars and citizens to emerge. However, as Jackson (1968) suggested, our data so far indicate that it is the everyday demands of the *institution* rather than the long-term goal of *socializing* that receive emphasis in teacher communication to children about the student role. The teacher is a manager of activities, and immediate institutional imperatives of conducting those activities and preventing chaos override what might be ideal-typical socializing practices. Instead, the teacher is a manager who mainly reacts, and reacts to things she does not like. Those things are mostly violations of the procedures that probably must be maintained if the show is to go on. Relatively rarely, and primarily when spurred by a negative event, is the teacher prompted to provide further socializing information involving her expectations, attributions of causality, or sanctions themselves. The student is essentially a socializee who absorbs on-the-job experience geared to passive citizenship in an ongoing institution.

Two kinds of potential differences in teacher talk were examined: those flowing from differences in teacher managerial effectiveness and the structure of tasks in the classroom, and those flowing from differences among the recipients of the communication themselves. Few effects of either type of variable were found, perhaps because of the fundamental similarity of managerial demands across classrooms. Our indicator of managerial effectiveness, the percentage of communication devoted to academic performance, was powerfully related to the negativity of teacher talk, with better managers less negative. While this result must provisionally be considered simply an empirical association, we tend to believe that managerial effectiveness and positivity are organically linked. Procedural issues, although they form the bulk of teacher communication, are essentially about interferences with the core task of instruction itself—and hence relatively negative. When the teacher is able to talk about academic performance, it indicates that she is doing the core task of the job. Such talk is also neither

positive nor negative by necessity, and hence emerges as more positive than communication about the interferences themselves. In contrast to managerial effectiveness, the degree of openness of task structure did not relate significantly to differences in teacher talk.

Differences among students—grade, sex, and social class—were linked to few differences in teacher communication. Teachers of first and fifth graders behaved quite similarly, with only slight tendencies for first-grade teachers to be more positive and for fifth-grade teachers to be more expansive with information about expectations. Given that from a socialization standpoint rather substantial differences might be optimal, as noted earlier, it would appear here that managerial imperatives work against the long-term goal. The most striking difference, the greater attention paid to boys, may reflect perceived managerial demands of averting classroom disruption. Our data, however, clearly do not paint boys as sheer classroom disruptors; they are instead primarily sheer attention-getters. The final structural difference, social class of students, proved to have almost no impact on teacher talk, with teachers in middle- and working-class schools behaving quite similarly. In this last case, at least, the apparent fundamental similarities in management needs produced a heartening result, insofar as we might have expected a still more procedurally or punitively oriented socialization pattern in the working-class schools than was observed overall.

Children's thoughts about the student role were more sharply differentiated by these latter structural variables than was the teacher talk directed at them. First graders were uniformly more eagerly conforming to classroom norms, whether in terms of their thought about the importance of these norms or their feelings regarding conformity/nonconformity. Girls and working-class children were also more conforming, although in the case of girls this was entirely in the realm of their feelings and in the case of working-class children it was predominantly so. These would appear to be differences imported to the classroom by the children, rather than produced by teachers' treatment, given the relative absence of differential treatment for either first graders or working-class children and the striking lack of attention paid to girls.

Both teacher structural differences—managerial effectiveness and openness—and features of teacher talk itself affected children's thought about the student role. All of these teacher variables, however, had effects on children's ratings of the importance of norms rather than on their ratings of feelings about the norms, suggesting that the more emotional/motivational area is less susceptible to teacher influence. The pattern of results generally suggests that although all students are absorbing on-the-job experience in the student role, the meaning of being "on-the-job" differs across classrooms in systematic ways.

The indicator of managerial effectiveness, degree of attention to academic performance, essentially reflects differential effectiveness in ability to organize and monitor academic work. Managerial effectiveness as defined by this criterion appears congruent with descriptions of good teachers (Anderson, Evertson, & Emmer, 1980; Brophy & Putnam, 1979), in that such teachers seem to monitor

student progress, provide feedback that is more oriented to work than to conduct, and keep the classroom running smoothly. In addition to previous findings that this type of environment influences actual achievement (Brophy, 1979; Rosenshine, 1976), our data show a positive impact on students' ratings of the importance of conforming to the role. In classrooms where teachers attended heavily to performance, children thought it was more important to adhere to the conventions of the classroom and to do work both properly and well.

The pattern of results found for openness of task structure also suggests something of the meaning of task structure for children's on-the-job experience. Openness per se had a generally negative effect on children's ratings of importance of various norms. However, it also interacted with managerial effectiveness such that, for the older children, teacher's low managerial effectiveness produced a negative impact of openness and high managerial effectiveness a positive impact of openness. Such a pattern is sensible in terms of the managerial demands of different structures. The more differentiated the organization, the greater the degree of management needed to coordinate students' efforts successfully (Brophy & Putnam, 1979). Monitoring, organizing, and managing a class in which a variety of tasks are going on simultaneously place great demands on the teacher. Thus as the degree of openness increases, the potential for disorganization increases—and hence so does the necessity for effective management. Although proponents of differentiated activity structures (Bossert, 1978; Horowitz, 1979; Walberg & Thomas, 1972) claim that they improve the potential for student involvement, interaction, and independence, this may only be true where the teacher is an effective enough manager. Yet a combination of good management and a relatively differentiated structure can lead to greater commitment to good quality work on the part of the student.

Children's experience of the student role was also affected by explicit socializing information provided by the teacher. In the present data set, three types of such information proved to affect children's thought about the role: percentage of academic performance communication devoted to attributions, percentage of academic procedure devoted to expectations/sanctions, and percentage of social procedure devoted to expectations/sanctions. The divergent impacts of these kinds of information on children's thought prove explicable in terms of the day-to-day communication they probably reflect. First, attributions about performance increased children's (and particularly older children's) ratings of the importance of academic performance and procedure. This may reflect the fact that most attributions were made after poor quality performance and generally referred to lack of effort, an issue which children perceive as very serious. Thus, it appears that the communication "you can do better" has the effect of focusing children on the idea that they must work and must persist.

In contrast, expectations and sanctions in the realm of academic procedure were likely to concern being off task and often communicated the negative consequences of not working or the likely punishments to be imposed. It is not surprising that teachers who provided proportionately more information about

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why it is bad not to work properly had students who in fact thought it was bad not to do so. It is possible that the additional effects of such information on children's ratings of academic performance reflect children's tendency to see work procedure and outcome as related (Blumenfeld, Wessels, Pintrich, & Meece, 1981; Stipek, 1981; Weinstein, 1981).

The divergent impact of social procedure expectations/sanctions, which had a negative impact on a variety of children's ratings, illustrates that frequency or type of communication per se has no necessary relation to outcomes. Most of this social procedure information concerned talking, an issue generally of low importance to the children. We would suggest that a series of relatively low affect and predominantly negative communications about an unimportant issue are likely to be defined as nagging and hence discounted. Certainly neither the negativity per se nor the procedural focus per se can account for the effect, given that academic procedure information, also negative, had positive impacts on children's ratings. It would appear that the meaning of the information to the child may be crucial.

Thus, despite the bleak picture of the student role as it appears in the overall outlines of teacher communication, the pattern of effects of teacher variables on children's thought about the role provides to some extent a prescription for hope. We should emphasize that the effects found were generally significant but small, possibly reflecting the overall similarities among teachers in carrying out their role. But it appears that the teacher who focuses on the central task to be done, who emphasizes issues of effort, who insists on keeping on task—such a teacher produces students more convinced of the importance of the central academic aspects of the role. The citizenship thus presented might be a relatively passive one, but the scholarship will get accomplished. Such a picture is probably relatively similar to that of a good manager in any area. The American school is thus much like the American factory, in that the small workers whose product is themselves need good managers in order either to turn out a good product or to care about the production process.

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